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The Use of DNA in Criminal Investigations

Te Whakamahi i te Ira Tangata i ngā Mātai Taihara

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Foreword

In 1995, New Zealand became the second country to create a legislative regime for DNA sample collection and profiling for criminal justice purposes.

The Criminal Investigations (Bodily Samples) Act (CIBS Act) regulates DNA collection from known individuals, either by consent or by compulsion, and establishes the national DNA databank to hold the resulting profiles.

The Act focuses on the use of a DNA profile to identify an individual offender – either by offering an investigative lead in relation to unsolved criminal offending or by providing evidence in the prosecution of an offence. For that reason a DNA profile has sometimes been referred to as the 'modern-day fingerprint' in terms of the function it performs in the criminal justice context.

But while fingerprints are literally unique, DNA by its very nature is shared with ancestors, siblings and children. In the 22 years since the Act came into force, it has become clear that the modern-day fingerprint analogy is increasingly inapt.

First, DNA profiling can now provide information that goes beyond identification of an individual person. Where there is no exact match to a DNA profile obtained from a crime scene sample, the national DNA profile databank can be used to search for close matches. This is called familial searching and is used to provide an investigative lead to a relative whose profile is not on the database.

Second, the paths to using DNA profiling as a criminal investigative tool are becoming more varied and may lie outside the CIBS legislation - for example, drawing inferences as to the ethnicity of an unknown offender (by analysing a crime scene sample) or the accessing of newborn blood spot cards (to enable comparison with crime scene samples). These uses are currently exceptional, but they have occurred.

Other uses that lie outside the CIBS Act are yet to happen here – such as accessing public genealogical databases to provide investigative leads, recently highlighted in the United States in relation to the Golden State serial killer investigation.

The science of DNA profiling will continue to develop. Profiling methods may become even more comprehensive, and profiling costs will reduce. Theoretically, whole genome sequencing could ultimately become the standard method of analysing a DNA sample, capable of generating a complete genetic picture of a person. Such a development will give a new perspective to the concept of genetic surveillance in the criminal context.

It is no longer possible to read the legislation and obtain an accurate picture of the role and function of DNA profiling in criminal proceedings.

We think these developments (and those that the science signals but have yet to come) raise questions on which we need informed public debate. Such questions must focus not only on how to support the effectiveness of DNA profiling in the criminal context but also address the significant privacy, tikanga, human rights and Treaty of Waitangi concerns that arise.

They are questions that could not have been asked 22 years ago in this area where law and science intersect so directly. It is time to ask them now.



Douglas White
President

Have your say

This issues paper setting out issues we have identified relating to the use of DNA in criminal investigations, with a focus on the Criminal Investigations (Bodily Samples) Act 1995, is available online at **www.lawcom.govt.nz**.

We want to know what you think about the issues covered in this paper. Do you agree or disagree with the way the issues have been articulated? Are there additional issues you think should be considered? Please also explain the reasons for your views.

Submissions or comments (formal or informal) on our issues paper should be received by **31 March 2019.**

You can email your submission to **dna@lawcom.govt.nz**.

You can complete your submission online at **https://dna-consultation.lawcom.govt.nz.**

You can post your submission to
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Law Commission
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Glossary

Abandoned sample	A biological sample that is already separated from its 'owner' and so obtained indirectly, rather than directly, from a person, for instance, saliva on a cup or mucus on a tissue. Also known as a 'covert sample'.
Adult	There is no definition in the CIBS Act but we use the term in this issues paper to mean someone aged 17 years or over. This is based on the definitions of child and young person that are in section 2 of the CIBS Act.
AIMs	Ancestry informative markers - specific points on the human genome where there is genetic variation amongst different ancestries/ethnicities. Conducting analysis of the DNA at these points can identify the likely ancestry/ethnicity of the person.
Allele	One of many forms that a genetic marker at a particular locus may take. Within the context of STR (short tandem repeat) analysis, this is a difference in the number of repeats of the DNA sequence at that locus. The data (for any given person) typically shows two allele sizes (shown as numbers) at each locus - one allele contributed by the person's biological mother and the other allele contributed by the biological father.
Autosomal chromosomes	All chromosomes except for the sex-determining one (X and Y). Humans have 22 pairs of autosomal chromosomes - one set inherited from the father and one from the mother.
Biometrics	The technical term for body measurements and calculations. Biometric information is information obtained from different parts of the body, such as iris scans or fingerprints.
Biological sample	Any sample of biological material, such as saliva, semen, blood or skin cells, that has been collected for the purpose of scientifically analysing the DNA contained within that sample. This could be a sample obtained from a known person or collected from a crime scene. Also known as a 'DNA sample'.
Buccal swab	Mouth swab – the usual method of obtaining a sample directly from a person by rubbing a sterile swab on the inside of the mouth or cheek.
Casework	Within the confines of a specific criminal investigation, the process of conducting either a forensic comparison of a crime scene profile and the profile of a known person or the analysis of a crime scene sample in isolation (that is, performing analysis on that sample alone, without comparing it to a reference sample).

CIBS Act	Criminal Investigations (Bodily Samples) Act 1995.
Child	As set out in section 2 of the CIBS Act, child means a person of or over the age of 10 years but under the age of 14 years.
Crime Sample Databank (CSD)	A databank established to store DNA profiles generated from biological samples collected from crime scenes. In New Zealand, ESR conducts the analysis of crime scene samples. The profiles generated from the analysis populate the Crime Sample Databank, which ESR maintains on behalf of New Zealand Police.
Crime scene sample	See 'biological sample'.
Direct sampling	The process of obtaining a biological sample directly from a known person, such as through a buccal swab or blood sample.
DNA	DNA (deoxyribonucleic acid) is a molecule that programmes how cells work. It is found in almost every cell in the human body.
DNA analysis	The process of analysing the DNA in a biological sample. This may, or may not involve generating a DNA profile.
DNA profile	Information derived from analysis of a biological sample. A profile consists of a series of numbers and letters that can accurately identify an individual. The numbers represent measurements taken at specific places on the non-coding regions of a person's genome. These locations were chosen because it was believed that they would not reveal any information about a person's genetic characteristics. The letters reflect a sex test and are usually XX or XY.
DNA Profile Databank (DPD)	A databank authorised by section 25 of the CIBS Act to store the profiles of known persons obtained from biological samples taken under Parts 2 and 3 of the Act. The DPD is administered for Police by ESR.
Elimination sample	A biological sample that is obtained from a person who is not considered to be a suspect. This may be a victim, a third party (for example, the victim's partner) or an investigator.
ESR	Institute of Environmental Science and Research.
Ethnic inferencing	The analysis of a biological sample (in this issues paper, a crime scene sample) at certain locations of the genome to predict the likely ancestry of the person who left the crime scene sample behind. Also known as 'ancestry inferencing'.
Familial searching	Searching the known person databank for a near match. This kind of search is used where a DNA profile has been generated from a crime scene sample but does not fully match a profile on the known person databank. Familial searching is based on the fact that siblings, parents and children will have genetic material in common. Familial searching can therefore provide an investigative lead to a parent, child or sibling of the person whose profile is a near match.

Forensic	The application of scientific methods and techniques to the investigation of crime.
Forensic comparison	The process of comparing a DNA profile generated from a crime scene sample to a DNA profile generated from a known person to see if they match. In casework, the forensic comparison is between the crime scene profile and a reference profile. A forensic comparison may also be between the Crime Sample Databank (CSD) and the known person databank.
Genome	The complete set of genetic information contained in the DNA of an organism. In the case of humans, the genome consists of approximately 3 billion base pairs of DNA.
FTA card	A special card used for the transport and storage of cellular material collected from a buccal (mouth) swab for analysis.
Indirect sampling	The process of obtaining a biological sample from a secondary source – not directly from a known person. This may be through covert sampling or, obtaining a sample from a relative etc.
"Junk" DNA	Non-coding sections of DNA. The STR markers currently included in DNA profiling kits are all found on non-coding regions of the genome. These locations were chosen because it was believed that they would not reveal any information about a person's genetic characteristics. These regions were misnamed as "junk", as it was wrongly thought that these sections of DNA did not perform any function.
Link rate	The percentage of DNA profiles that have matched another DNA profile on one of the databanks. This may refer to links between profiles on a databank of crime scene profiles and the profiles on a known person databank or crime scene to crime scene links (between profiles uploaded to a databank of crime scene profiles). In New Zealand, this is links between the Crime Sample Databank (CSD) and known person databank (which consists of the Temporary Databank and the DPD) or links within the CSD.
Locus/Loci	Specific area/s or site/s on a chromosome.
Low copy number (LCN) analysis	A technique that involves additional copying of small amounts of DNA obtained from only a few cells.
Known person databank	A DNA profile databank containing profiles from known persons. In this issues paper we primarily use this phrase to refer, collectively, to the DNA Profile Databank (the DPD) and the Temporary Databank.
Match	When the identifiable STRs in two DNA profiles are exactly the same. If both profiles have identifiable STRs at all of the possible markers, this is referred to as a match or a full match. If one or both of the DNA profiles only contains some of the possible markers, this is referred to as a partial match.
Mass screening	When Police obtain biological samples by consent from a relatively large group of people who share particular characteristics, with a

	view towards identifying a suspect. The characteristics will be ones that the investigators believe the offender also shares, for example, all males aged between 20 and 30 who live in a particular geographic area.
Phenotyping	The process of analysing a person's DNA to predict their likely physical appearance. Ethnic inferencing is a type of phenotyping.
Police Manual	The Police Manual consolidates New Zealand Police rules and policy, including relevant law, and contains numerous individual chapters on each aspect of policing. It contains standard operating practice, principles and procedure that should be followed, although Police may work outside this standard operating practice where it is justified to do so. The Police Manual is in the form of an electronic database and is not available in hard copy.
Reference sample	Biological samples that are obtained from known persons (such as suspects, victims, third parties or investigators). The profile generated from such a sample (the reference sample) is then compared with the profile obtained from a crime scene sample.
Single nucleotide polymorphisms (SNPs)	Variations at the level of single base pairs – the simplest and most common form of genetic variation, accounting for about 90 per cent of the variations in humans.
Single tandem repeats (STRs)	Repetitive chains of bases that occur at certain points on the genome, the length of which varies from person to person.
STR profiling/traditional STR profiling	Short tandem repeat analysis – the process that focuses on areas of the genome that are known to vary among humans. STR profiling targets particular locations (loci) where these STRs are known to occur and measures them by counting how many times the chain is repeated at that location. Except for the Y chromosome, there are two STRs at each location (one inherited from each parent), known as 'alleles'.
STRmix	Software developed by ESR and Forensic Science South Australia that uses mathematical algorithms to identify the most likely combination of DNA profiles in a mixed crime scene sample. Also used to interpret single contributor DNA profiles.
Temporary Databank	A databank authorised by the CIBS Act (2009 amendment) to store the profiles of known persons obtained from biological samples taken under Part 2B.
Trace DNA	A tiny amount of a biological sample containing a very low-level amount of DNA. Various analysis techniques, such as low copy number (LCN) analysis, are used to analyse trace DNA. Trace DNA often consists of skin cells collected from objects at a crime scene that have been touched by someone (which is an example of 'touch DNA').
Touch DNA	DNA obtained from items that have been touched by someone and from which DNA can be collected.

Transferred DNA	Primary transfer occurs when DNA is directly transferred from a person to an object. Secondary transfer occurs when the DNA deposited on one object is transferred to a second object or person (for example, after skin to skin contact between two individuals).
Volume crime	Cases involving general theft, burglary or vehicle crime. Vehicle crime includes unlawful taking of and theft from vehicles.
Whole genome sequencing	Identifying and recording the order of all of the base pairs that make up the genome. In the case of humans this is approximately 3 billion base pairs.
Young person	As set out in section 2 of the CIBS Act, young person means a person of or over 14 years of age but under 17 years of age.[1]
Y-STRs	Loci on the Y chromosome. Y-STR profiling is used primarily to detect male DNA in the presence of female DNA.

[1] Police has advised that a process is underway to amend the Criminal Investigations (Bodily Samples) Act 1995 to reflect the change to the age of a young person who is covered by the the youth justice system under the Oranga Tamariki Act 1989. It is intended that this change will come into effect on 1 July 2019. Pursuant to those changes, "young person" will include a person of or over the age of 14 years but under the age of 18 years.

Key terms and actors

KEY TERMS

This issues paper deals with three core inter-related concepts: biological samples, DNA profiles and DNA profile databanks. Below we introduce these concepts and explain the main differences between them.

Biological sample

We use the term **biological sample** to refer to any sample of biological material, such as saliva, blood or semen, which has been obtained for the purpose of scientifically analysing the DNA it contains.

Biological samples are collected from crime scenes by seizing or swabbing items that have biological material on them. We refer to these as **crime scene samples**. Biological samples are usually obtained from known individuals by asking the person to rub a swab along the inside of their cheek. This is called buccal swabbing (mouth swabbing).[1] In this issues paper, we refer to biological samples obtained from known persons as either **reference samples** (samples obtained for use in a particular case, such as sampling of suspects) or **databank samples** (samples obtained for the sole purpose of generating a DNA profile for the known person databank).

Casework

Casework is the term used within a specific criminal investigation to describe the process that covers all of the stages below.

Stage 1. Obtaining a biological sample:

- from a crime scene (see Chapter 5);
- directly from a known person such as a suspect or a victim (see Chapter 8); or
- in respect of a suspect not from them directly but from a secondary source, for instance, from an item abandoned in a public place by the suspect (such as a coffee cup) or from a personal item belonging to a suspect (see Chapter 9).

Stage 2. Analysing the sample to generate a DNA profile – respectively referred to as a **crime scene profile** or a **known person profile/suspect profile**) (see Chapter 7).

Stage 3. Comparing one profile to another profile (for instance, comparing a crime scene profile to the known person profile) to see if there is a match in order to rule someone into Police enquiries or eliminate them from enquiries (see Chapter 7). The results of this comparison can

[1] Buccal swabbing is discussed in Chapter 8. It is also possible to collect a sample from a known person indirectly. For example, an indirect sample may be obtained by seizing an item that the person has disposed of such as a cup that may have a biological sample on it. Indirect collection of samples is discussed in Chapter 9.

later be used as evidence in court, so Police sometimes refer to the casework process under the CIBS Act as "evidential" sampling or obtaining samples for investigatory purposes.

Stage 4. There is another option available within casework that only applies to crime scene samples. Instead of analysing a crime scene sample to obtain a profile that is compared to another profile, a forensic scientist can perform analysis on the crime scene sample alone (or in isolation). The purpose of this is to mine the crime scene sample for information about the person who owns the DNA. This is referred to as **forensic DNA phenotyping** (see Chapter 6).

DNA profile

On average, any two people share 99.9 per cent of their DNA.[2] However, specific areas of the DNA molecule vary highly between people. By focusing on these areas, scientists can analyse a biological sample to generate a series of numbers, known as a **DNA profile**, which can accurately identify an individual. We discuss DNA profiles in Chapter 3.

DNA profile databanks

In this paper, we refer to two main types of **DNA profile databank**: databanks containing profiles from known individuals and databanks containing profiles associated with crime scenes.[3]

The Crime Sample Databank

In New Zealand, if a biological sample is collected from a crime scene, it may be analysed by the Institute of Environmental Science and Research (ESR) to obtain a DNA profile. ESR may then upload the profile onto what it calls the Crime Sample Databank. This is a databank of crime scene profiles. It is not regulated by nor even mentioned in the CIBS Act. Instead, it is governed by policies agreed between ESR and Police. When we are discussing this specific databank, we refer to it as the **Crime Sample Databank** (CSD). When we are talking generically about databanks that contain profiles collected from crime scenes, we refer to them as **crime scene databanks**.

The known person databank

The CIBS Act establishes two DNA databanks that contain DNA profiles from people whose identity is known – such as suspects or those arrested and charged with certain offences.

The original databank that was established by the Act is the **DNA Profile Databank** (**DPD**). This is sometimes referred to as the National DNA Profile Databank. It contains DNA profiles from certain convicted offenders (obtained by consent or compulsion) and from others who have provided DNA samples to police officers for the purpose of adding their profiles by consent.

The second databank is the **Temporary Databank,** established by the 2009 amendment. The Temporary Databank contains DNA profiles from individuals who have been charged with an imprisonable offence or the offence of peeping and peering. If a person is later acquitted of the

2 In the case of identical twins, scientists thought until recently that they shared identical DNA. However, discoveries have now shown their DNA can be distinguished due to mutations that occur in each of their genes after the fertilised egg splits and over the course of their lifetimes.

3 Other jurisdictions use different terminology – see Table 5 in Chapter 4.

offence or the charges are withdrawn, their DNA profile is destroyed. If a person is convicted of the offence, their profile is automatically transferred to the DPD.

The CIBS Act gives the impression that the DPD and the Temporary Databank are two separate databanks, but in practice, that is not the case. Both are stored within the same computer system and are routinely compared to the Crime Sample Databank. There are differences in the collection and retention criteria for the databanks but the profiles themselves are stored and used in virtually the same way.[4] For this reason, we usually refer to the DPD and the Temporary Databank collectively in this paper as **the known person databank**, except when we are specifically discussing provisions in the CIBS Act. When we are talking generically about databanks that contain profiles collected from known people (for instance, such databanks in other countries) we refer to them as **known person databanks.**[5]

KEY ACTORS

The Ministry of Justice is responsible for administering the CIBS Act. However, in practice, the operational work is conducted by two other organisations: Police and ESR. Below is a very high-level explanation of their roles and relationship.

New Zealand Police

New Zealand Police is an instrument of the Crown and one of its functions is to investigate and prosecute offences.[6] In performing this function, the Commissioner of Police is not responsible to, and must act independently of, any Minister of the Crown.[7]

As discussed above, the CIBS Act empowers police officers, in certain circumstances, to obtain biological samples from known individuals for use in criminal casework. The Act also states that the DPD and the Temporary Databank may be maintained "by or on behalf of the Police." However, Police has no internal DNA analytical service, and ESR provides these services to Police. Services include assistance in serious crime scene examinations, forensic analysis of biological samples, maintaining DNA profile databanks and court-related processes.

ESR

ESR is a Crown Research Institute. It operates as a company[8] and has seven areas of science capability: forensic science, health science, radiation science, social science, workplace drug

4 One significant difference in relation to use is that only information stored on the DPD can be shared with a foreign country in response to a request made pursuant to the Mutual Assistance in Criminal Matters Act 1992. This is discussed in Chapter 12.

5 There are two other largely unregulated known person databanks that Police operate. One is the Criminal Investigators Elimination Database (CIED), which contains profiles from investigators and scientists who collect and/or analyse DNA samples. Section 82 of the Policing Act 2008 provides that Police employees and associates may voluntarily provide a bodily sample for DNA profiling. The Policing Act does not, however, expressly mention the CIED. This is discussed in Chapter 10. The second is the Y-STR population databank, which contains DNA profiles collected from known individuals who complete a voluntary ethnicity form. These profiles are then anonymised and assist ESR in calculating likelihood ratios and in conducting ethnic inferencing. This is discussed in Chapters 6 and 11.

6 Policing Act 2008, ss 7(1) and 9.

7 Policing Act 2008, s 16(2)(c).

8 Crown Research Institute Act 1992, s 11.

testing, food science and water science. It provides knowledge, research and laboratory services in all of these areas.

ESR has provided forensic science services to Police since before the CIBS Act came into force in 1996. Originally, this was done by way of a bulk-funding arrangement, but in 1998, this changed to a fee for service billing model set out in a Forensic Science Services Agreement. Periodically, Police and ESR negotiate a new agreement setting out the fees. The most recent agreement covers the years 2018-2021.

The agreement is based on the fundamental principle that ESR will be Police's "sole source provider" of forensic science services.[9] Under the agreement, ESR undertakes all DNA profiling mandated by the CIBS Act as well as maintaining various statutory and non-statutory DNA profile databanks. It is not, however, directly or indirectly referred to in the CIBS Act.

[9] Police and ESR "Forensic Science Services Agreement" 2018-2021 at [10].

Executive summary

THE REVIEW PROCESS AND THIS ISSUES PAPER

1. The Law Commission is reviewing the use of DNA in criminal investigations, with particular focus on the Criminal Investigations (Bodily Samples) Act 1995 (CIBS Act). Our terms of reference ask us to determine whether the CIBS Act is keeping pace with developments in forensic science, international best practice and public attitudes and whether it gives appropriate recognition to law enforcement values and human rights, including the right to privacy.

2. In preparing this issues paper, the Commission has engaged with a wide range of stakeholders. We held frequent meetings with New Zealand Police and the Institute of Environmental Science and Research (ESR), the two agencies that use the CIBS Act on a day-to-day basis. We established two advisory groups, one of experts and one of officials, with whom we met twice. Our Māori Liaison Committee convened a sub-committee to consult with us. We attended the Australian and New Zealand Forensic Sciences Symposium in 2016. We also met with more than 30 other interested parties, including academics specialising in law and social sciences, and experts from Australia, Canada and the United Kingdom.

3. We launched a publicly available educational website, which included scenarios to introduce the current legislation, highlighted some of the issues we saw arising and invited general comment.

4. As a result of our consultation and research to date, we have built on our terms of reference to identify three core objectives for our review. In short, our review aims to ensure that the law governing the use of DNA in criminal investigations is:

 (a) Fit for purpose. That is, it has a clear purpose; the rights and obligations are framed in a way that provides sufficient certainty and flexibility; it is comprehensive enough to deal with likely scenarios; and it works effectively with inter-related legislation in the criminal justice sector.

 (b) Constitutionally sound. That is, it is consistent with the New Zealand Bill of Rights Act 1990 (NZBORA) and the principles of the Treaty of Waitangi, and where intrusions upon tikanga Māori and privacy are necessary for law enforcement purposes to protect and safeguard citizens in a democratic society, such intrusions are minimised.

 (c) Accessible. That is, it is conceived of and expressed as simply as possible so that the law is easy to find, navigate and understand.

 We discuss these objectives in Chapter 2.

5. Using these three objectives, we have identified issues with the current law governing the use of DNA in criminal investigations and we have developed various options for reform. This issues paper sets out those issues and options. We also arrive at some preliminary proposals, key to which is our view that it is time for a new Act.

6. The purpose of this issues paper is to facilitate consultation and foster public debate. Many of the issues and options are relatively technical and so our target audience is primarily those who work in the criminal justice sector or a related scientific, academic or legal field. However, some core issues would benefit from much wider public debate. To promote that debate, we are relaunching an updated version of our website at https://dna-consultation.lawcom.govt.nz.
7. We are calling for submissions on this paper until 31 March 2019. Submissions can take any form, but we have included questions in the issues paper (and on the website) to give submitters an indication of the areas where we think feedback would be most valuable. A copy of the full list of our questions is at the end of this issues paper. The submissions we receive, both in response to this issues paper and through our website, will inform our final report, which we intend to provide to the Minister of Justice in the latter half of 2019.

HOW IS DNA USED IN CRIMINAL INVESTIGATIONS?

Part A: A general overview

8. Part A of this paper deals with background and conceptual matters. This includes a summary of the science involved in forensic DNA analysis (Chapter 3).
9. Police primarily use DNA to link people to crime scenes. This involves collecting and analysing biological samples (for example, blood or skin cells) from known people and from crime scenes. These are called reference samples and crime scene samples, respectively.
10. The samples are analysed by ESR (on behalf of Police) to generate DNA profiles. A DNA profile is a series of numbers and letters that can accurately identify an individual. The profile from the crime scene sample is then compared to the profile from the known person to see if they match. This process is referred to as a forensic comparison.
11. If the two profiles match, that can be a strong indication that the known person was at the crime scene. If the two profiles do not match, that person may not have been there. This kind of information can be vital in a criminal investigation.
12. Part A also sets out the case for needing a new Act that replaces the CIBS Act. Our paper is based on this proposition, and the chapters that follow explore the options for what that new Act should say.

Part B: Casework

13. The CIBS Act provides a statutory framework for Police to obtain biological samples directly from suspects (the suspect regime). This is one form of reference sample. Another type of reference sample is an elimination sample. These samples are obtained from known people whose DNA may be present in a crime scene sample but who are not suspects. These people may include victims, third parties and investigators. The CIBS Act does not cover elimination samples.
14. Nor does the CIBS Act address indirect suspect sampling. This is when a biological sample relating to a suspect is obtained by police officers through a secondary source, for example, from a personal item belonging to the suspect, such as a toothbrush.

15. Where a forensic comparison occurs or where a crime scene sample is analysed in isolation within a specific criminal investigation, we refer to this as "casework". This term covers the entire process, from the collection of crime scene and reference samples right through until the matter goes to trial and/or the investigation is closed. Part B of this issues paper (Chapters 5 to 9) relates to casework.

Part C: Databanks

16. The CIBS Act also establishes what we refer to as the known person databank. This is maintained by ESR on behalf of Police.

17. The Act itself refers to two databanks: the DNA Profile Databank (DPD) and the Temporary Databank. As we explain throughout this paper, the DPD and the Temporary Databank are not really distinct databanks, as they are each used by Police in almost exactly the same way. In this issues paper we refer to them jointly as the known person databank.

18. The Act provides various different ways in which a police officer can obtain a biological sample from a person for the purpose of generating a DNA profile and storing it on the known person databank (a databank sample). At present, the most common way is for a police officer to require a person to provide a databank sample when they arrest or intend to charge the person with an imprisonable offence. If the charge is later withdrawn or the person is acquitted, their profile is removed from the known person databank.

19. ESR regularly compares the known person databank to a databank of crime scene profiles, which it also maintains on behalf of Police. (ESR calls this the Crime Sample Databank, and we will refer to it as such throughout this issues paper.) The Crime Sample Databank (CSD) is not mentioned in the CIBS Act. It contains DNA profiles that have been generated from crime scene samples. If a comparison between the CSD and the known person databank results in a match, that information is forwarded to Police in the form of a link report. Again, this may provide Police with useful information that can help to resolve a criminal investigation.

20. Technically, it is possible to use the CSD and the known person databank within the confines of a specific investigation, as we discuss in Chapter 8: Reference samples – direct collection. However, most of the time the databanks are used to generate investigative leads in cases other than the one for which the databank sample was originally taken. Part C of this paper (Chapters 10 to 13) considers the issues and options relating to databanks more generally.

Part D: Retention and oversight

21. Part D of this issues paper then deals with two over-arching topics: the retention of biological samples and DNA profiles (Chapter 14) and oversight (Chapter 15).

UNDERLYING THEMES

22. There are three underlying themes to the issues that we identify in this paper:

- The purpose of the Act is unclear and the structure confusing.
- There are public misconceptions about DNA and its effectiveness.

- The science is continually developing, and this is being responded to internationally.

The purpose and structure of the CIBS Act

23. One of the recurring themes is that the purpose of the CIBS Act is unclear and its internal structure is confusing.

24. The CIBS Act came into force in 1995 and has been the subject of two major amendments: one in 2003 and a second in 2009. These amendments blurred the original purpose and structure of the Act. It is now no longer clear whether DNA should be used primarily to investigate sexual and violent offending, or whether it should be used to investigate any criminal offence. This is important because it affects the decisions that are made around what DNA profiles are uploaded onto the CSD and the known person databank, as we discuss in Chapter 2: Framework for analysis, Chapter 10: Crime Sample Databank and Chapter 11: Known person databank – collection.

25. The role of the Temporary Databank, which was introduced in 2009, is also unclear. The power that enables police officers to obtain DNA profiles for the Temporary Databank can be used in a way that undermines both the original suspect regime in the CIBS Act and the original regime governing the DPD. Unlike those two regimes, the process of obtaining databank samples for the Temporary Databank is not expressly subject to any court oversight. We explain why we see that as problematic in Chapter 8: Reference samples – direct collection and Chapter 11: Known person databank – collection.

26. A further issue is that several significant matters are not addressed in the CIBS Act. For instance, unlike equivalent legislation in some comparable jurisdictions, the Act does not regulate elimination sampling or the CSD. This may be because New Zealand was one of the first countries to enact a legislative regime for using DNA in criminal investigations. Early adoption of such a regime has meant that New Zealand did not have the benefit of learning from the experiences of its international counterparts. Many of those countries have since adopted legislation that provides a more complete picture of how DNA and DNA profile databanks are used in policing. We look at the reasons why it might be beneficial to place a statutory framework around elimination sampling and the Crime Sample Databank (CSD) in Chapter 8: Reference samples – direct collection and Chapter 10: Crime Sample Databank, respectively.

27. Another matter that is not covered by the CIBS Act is indirect suspect sampling. The relationship between indirect suspect sampling and the suspect regime in the CIBS Act is not clear. Furthermore, there is some doubt as to whether a police officer can currently obtain a search warrant to seize a suspect's personal belongings and to arrange for DNA profiling. Additional doubt arises where a police officer may wish to seize a pre-existing biological sample that has been collected for a medical purpose (such as a suspect's newborn blood spot card). There is also legal uncertainty around collecting and analysing items found in public places (such as a cup thrown in a rubbish bin by a suspect). We explore these issues in Chapter 9: Reference samples – indirect collection. We also discuss related concerns around the availability of search warrants to collect and analyse crime scene samples in Chapter 5: Crime scene examinations.

Public misconceptions and measures of effectiveness of DNA profiling

28. A second underlying theme in this paper is that there are public misconceptions about the use of DNA in criminal investigations.

29. This phenomenon is not limited to New Zealand. Research, particularly around jury trials, has shown that members of the public often expect DNA analysis to play a pivotal role in resolving most criminal investigations, particularly those involving sexual and violent offending. There are several high-profile examples of DNA being used in this way, and popular television dramas, such as *CSI: Crime Scene Investigation*, may have inflated public expectations. The reality is somewhat different, as we discuss in Chapter 2: Framework for analysis, Chapter 5: Crime scene examinations and Chapter 10: Crime Sample Databank.

30. Exact figures are unknown, but research suggests that crime scene samples are collected and sent away for DNA profiling in 0.5–2 percent of all criminal investigations in New Zealand. Furthermore, some of these crime scene samples will not contain enough DNA to enable a scientist to generate a usable DNA profile. Others will be sent for analysis, even though the identity of the offender is already known. This highlights why DNA profiling should be treated as just one of the many investigative tools that need to be made available to Police.

31. In addition, around three-quarters of the DNA profiles currently on the CSD relate to "non-suspect volume crime", that is, investigations into burglary, general theft or vehicle crime (theft of, or from, a vehicle) where there is no suspect sample available for comparison. This suggests that the databanks may be most effective in resolving investigations into property offending as opposed to sexual or violent offending.

32. However, this is not certain. While Police report the number of matches between the CSD and the known person databank each year (around 2,000–2,500), it does not routinely collect any additional data on the nature or impact of these matches. We do not know the type of investigations the matches relate to, whether they were followed up or whether they assisted in resolving the investigations.

33. There is also a pressing need in New Zealand to gather more data to measure how effective our DNA profile databanks are. This will help to identify where improvements can be made. In particular, it will help to ensure that the intrusions on individual privacy that are inherent in maintaining a known person databank are justified by the law enforcement benefits. That issue is central to Chapter 11: Known person databank – collection.

34. In terms of the known person databank, there may also be public misconceptions as to whose DNA profiles are on it. The CIBS Act empowers police officers to obtain databank samples from people who have been charged with, or convicted of, an imprisonable offence.

35. However, as we explain in Chapter 11: Known person databank – collection, those statutory collection powers are broad and discretionary. Only some of the people who qualify are required to provide a databank sample. This leaves room for inconsistency and unconscious racial bias. There is a risk that the known person databank could then exacerbate any bias by enabling more efficient policing of the people whose profiles are already on it. This is a particular concern for Māori. The Police Commissioner has

acknowledged that there is unconscious bias against Māori in policing. The risk of exacerbating these issues should not be taken lightly.

36. Compounding these issues is the fact that police officers can also obtain databank samples by consent. The CIBS Act does not place any constraints around this power. As such, there is no way of knowing why some people will have been asked to provide databank samples but not others. Historically, obtaining databank samples by consent was very common, and over half of the DNA profiles currently on the known person databank were generated from such samples. Some of these people may never have been charged with, or convicted of, imprisonable offending (and have never asked to have their profiles removed).

37. Finally, a common misconception we discuss throughout the paper is that a DNA profile is a modern-day fingerprint. Similar to a fingerprint, DNA is something that can be used to accurately identify that person. But as the Supreme Court of Canada has observed, "[u]nlike a fingerprint, [DNA] is capable of revealing the most intimate details of a person's biological makeup".[1]

38. It is true that, at present, reference and databank samples are only analysed to the extent needed to generate a DNA profile. That profile does not consist of the person's entire genome sequence (that is, the complete set of genetic information contained in the DNA of an organism). In humans, this consists of all 3 billion base pairs, written out in sequence. Instead, the profile consists of up to 42 numbers and (usually) two letters. The numbers represent measurements taken at specific places on the non-coding regions of a person's genome. These locations were chosen because it was believed that they would not reveal any information about a person's genetic characteristics. The letters reflect a sex test and are usually XX or XY. When profiling first began, a DNA profile was viewed as being an uninformative (aside from sex) but virtually unique barcode.

39. However, there are two important points to note. First, a person's biological sample, containing their entire genome, is still collected and retained by the State, albeit briefly. How the samples are dealt with is therefore very important for maintaining public trust, as we discuss in Chapter 14: Retention of samples and profiles. Second, the CIBS Act does not place any limitations around the nature or amount of information that can be included in an individual's DNA profile.

40. This second point is a problem because, as we explain in Chapter 7: Forensic comparisons, the current trend is towards including more and more information in DNA profiles. There are sound scientific reasons for this trend, but there are also privacy implications. Relatedly, the Act does not place any limitations on how crime scene samples can be analysed, as we discuss in Chapter 6: Forensic DNA phenotyping, or on the type of research that can be conducted using the DNA profile databanks in an anonymised form, as we discuss in Chapter 12: Known person databank – use.

41. Put simply, no other biometric data can reveal anywhere near the amount of personal information that is contained in a DNA molecule. This means that, while DNA can be a powerful tool in criminal investigations, its use raises significant privacy concerns far beyond those associated with fingerprinting, as we discuss in Chapter 6: Forensic DNA

1 *RC v C* 2005 SCC 61, [2005] SCR 99 at [27].

phenotyping, Chapter 12: Known person databank – use and Chapter 13: Familial searching.

Scientific developments and international responses

42. The third underlying theme in this paper is that scientists are constantly learning more about DNA and developing new DNA analysis techniques. This poses a significant challenge for those seeking to regulate the use of DNA in criminal investigations.

43. A prime example is that, over time, reference and databank sampling by Police has become less physically invasive but has become more intrusive into privacy.

44. When the CIBS Act was enacted in 1995, a police officer had to obtain a blood sample from a person in order to obtain enough DNA for a scientist to generate a DNA profile. This required a medical practitioner to either prick the person's finger or extract blood from their vein using a syringe. This was a grave intrusion on autonomy and bodily integrity, so robust statutory safeguards were put in place. Many of these safeguards were then retained when the less physically intrusive option of buccal sampling was introduced in 2003. Buccal sampling involves a person rubbing a swab on the inside of their own mouth. The change caused a disjunct between the level of physical intrusion in the sampling process and the statutory safeguards, as we explain in Chapter 8: Reference samples – direct collection.

45. At the same time, the amount of information routinely included in DNA profiles has increased since 1995. In addition, new DNA analysis techniques have emerged that push the boundaries of compliance with NZBORA and that Parliament has not yet expressly considered.

46. One example is forensic DNA phenotyping. This is when a crime scene sample is analysed to predict aspects of the physical appearance of the person who left the sample. This may include inferring the person's ethnicity. This technique may be discriminatory on the basis of ethnicity. It also raises practical and ethical concerns, as we discuss in Chapter 6: Forensic DNA phenotyping.

47. A second example is familial searching. This is when a scientist compares the CSD and the known person databank and looks for near matches. A near match may indicate that a close relative of the person on the known person databank was responsible for the crime scene sample. We consider that this technique is likely discriminatory on the basis of family status, as we discuss in Chapter 13: Familial searching. We explore whether its use may, nevertheless, be justified in limited circumstances.

48. Another scientific development that Parliament has not expressly considered is the emergence of increasingly sensitive DNA technology. This can be used to generate a DNA profile from the skin cells left behind on an item that a person has merely touched. This kind of technology has existed since 2007, and it is becoming increasingly commonly used. It heightens concerns around background DNA (DNA that was at the crime scene before any offence occurred), transferred DNA (DNA that is transferred via a third person to a crime scene) and contamination, as we discuss in Chapter 7: Forensic comparisons.

49. How to address these and other scientific developments is the subject of continuing international discussion. As a partial solution, many countries have established independent bodies to oversee the operation of DNA profile databanks and the use of DNA in criminal investigations more generally. This provides a measure of public

accountability and transparency, whilst also enabling legislation to be flexible enough to accommodate continuing scientific change. We look at the oversight framework in comparable jurisdictions in Chapter 15: Oversight. In doing so, we emphasise that an important feature of any oversight regime in New Zealand will need to be providing a central role for Māori. That is because Māori are currently over-represented in the criminal justice system and are more likely to be adversely affected by use of discretionary powers, forensic DNA phenotyping, familial searching, research on the databanks and retention of biological samples and DNA profiles. In those circumstances, the Treaty principles of active protection, equity, rangatiratanga and partnership indicate that Māori should have an active role in all governance decisions.

PRINCIPAL PROPOSALS FOR REFORM

50. These are the two main proposals for reform in this issues paper:

(a) The CIBS Act should be repealed and replaced with more comprehensive legislation.

(b) A public agency that is independent of Police and ESR should be given oversight functions in relation to the use of DNA in criminal investigations. Māori should have a central role in oversight. Oversight functions could be an extension of an existing agency's role (such as the Privacy Commissioner), or a new agency could be created (such as a multi-disciplinary oversight committee, an advisory ethics group and/or a specialist Commissioner).

These proposals are mentioned throughout this paper, but given their centrality, they are also the subjects of Chapter 4: Time for a new Act and Chapter 15: Oversight.

51. In the paper, we also put forward several different options and some preliminary views on how a new Act could be framed to help to address the issues we have identified. This includes discussions of the following:

(a) How to frame the objective for any new Act (including its purpose, accessibility and constitutional soundness): Chapter 2: Framework for analysis.

(b) Whether ESR's role should be recognised in statute, and if so, how that role should be framed. We propose that the role of Police forensic service provider should be recognised and suggest possible criteria that the provider could be required to meet: Chapter 7: Forensic comparisons.

(c) Whether new legislation should adopt the model of a DNA database system that is used in Australia, Canada and Ireland. Under this model, a DNA database contains multiple indices. Each index contains DNA profiles belonging to a particular category of people. For instance, there could be indices respectively for convicted offenders, suspects, crime scenes, victims, third parties and/or investigators. The model contains strict rules around permissible matching between indices. Such an approach could address some of our concerns around the accessibility of the current law, confusion caused by the Temporary Databank and inadvertent misuse of elimination and crime scene profiles. We also explore whether the latter concern could be alleviated by introducing statutory frameworks around obtaining, uploading and retaining elimination and crime scene profiles: Chapter 4: Time for a new Act and Chapter 10: Crime Sample Databank.

(d) How the effectiveness of the DNA profile databanks (or a new DNA database system) should be measured and monitored. This includes discussion of possible reporting requirements and of auditing and monitoring functions, including assessing consistency with NZBORA and the principles of the Treaty of Waitangi and looking at privacy and tikanga issues, which could be given to an oversight body: Chapter 10: Crime Sample Databank.

(e) How to regulate the DNA profiling process and other forms of DNA analysis. This could include placing statutory rules around the introduction of new DNA analysis techniques, defining "DNA profile" in a more meaningful way, describing standard DNA analysis in statute; and/or including guiding principles around what kinds of analysis are permissible: Chapter 7: Forensic comparisons.

(f) Whose DNA profiles should be stored on the known person databank. We discuss options relating to whether databank samples should be collected from convicted offenders, suspects, anyone who agrees to provide a databank sample by consent or all New Zealand residents (otherwise known as a universal databank). We put forward variations on each of these options and explore the advantages and disadvantages: Chapter 11: Known person databank – collection.

(g) Whether suspect and databank samples should still be obtained by informed consent. As an alternative, we explore whether new regimes based around court orders or contestable notices issued by senior police officers could be introduced. We also consider how the procedures surrounding consent could be improved if the alternative options are not favoured: Chapter 8: Reference samples – direct collection and Chapter 11: Known person databank – collection.

(h) Whether the process of obtaining reference and databank samples could be made less physically intrusive and more compliant with tikanga Māori, for instance, by introducing new sampling methods and/or alternatives to the use of reasonable force, if a person refuses to comply with a court order, notice or statutory rule requiring them to provide a sample: Chapter 8: Reference samples – direct collection.

(i) How the indirect and direct suspect sampling processes interact with each other. We propose that this is one of the areas where the courts and/or an oversight body could have an active role: Chapter 9: Reference samples – indirect collection.

(j) How forensic DNA phenotyping, familial searching, the use of newborn blood spot cards and mass screening could be dealt with in statute. In relation to each, we propose a permissive but conservative approach. We also explore a variety of options involving the courts and/or an oversight body having a statutory role: Chapter 6: Forensic DNA phenotyping, Chapter 13: Familial searching, Chapter 9: Reference samples – indirect collection and Chapter 8: Reference samples – direct collection.

(k) Whether new legislation should clarify the rules around using the known person databank for research purposes or to obtain and share information with a foreign law enforcement agency. We suggest that there should be more transparent rules around these uses and put forward options for expanding international information sharing and limiting permissible research: Chapter 12: Known person databank – use.

(l) Whether the rules governing the collection, analysis and destruction of crime scene samples in the Search and Surveillance Act 2012 should be amended and whether

the general search warrant provision in that Act should also be amended: Chapter 9: Reference samples – indirect collection.

(m) How to increase transparency around the length of time biological samples are retained by Police and how they are destroyed. This includes a discussion of what should happen to crime scene samples and possible new mechanisms to facilitate convicted offenders obtaining access to those samples in certain circumstances for re-analysis: Chapter 14: Retention of samples and profiles.

(n) Whether there is a need to introduce a new legislative regime around the retention of DNA profiles on the known person databank that is simpler, places a greater emphasis on rehabilitation, and facilitates the removal of profiles after death. We propose different options as to how such a regime could be structured: Chapter 14: Retention of samples and profiles.

BROADER ISSUES

52. In preparing this paper, we became aware of several broader issues that fall outside our terms of reference. These issues provide important context for the discussions in this paper. We put forward options for reform that could address aspects of these broader issues as well. The issues fall into three categories.

The use of non-DNA based forensic sciences in criminal investigations

53. Non-DNA-based forensic science includes fingerprint, bite mark, hair, ballistic and footprint analysis. As we explain in Chapter 7: Forensic comparisons, two highly influential reports have recently been released on this topic in the United States. As we explain in Chapter 15: Oversight, an independent oversight body could be established to oversee the use of forensic science in investigations more generally, not just Police's use of DNA in criminal investigations.

The presentation of expert scientific evidence in court

54. There is a growing body of research in New Zealand and overseas regarding the dangers posed by the presentation of expert evidence by scientists in court. This includes scientists discussing DNA evidence. Put simply, there are fears that juries often do not understand scientific evidence, especially when it is presented in the form of probabilities, and that therefore they are unable to properly assess it.

55. As we explain in Chapter 7: Forensic comparisons, this issue is largely outside our terms of reference because it concerns scientific evidence more generally and many of the solutions relate to the law around expert evidence and trial procedure. That law is not contained in the CIBS Act. Nonetheless, we suggest that changes could be made to the CIBS Act to make the DNA analysis process more robust and transparent. This could provide some reassurance around the nature and quality of any evidence given about that process at trial.

The use of DNA in non-criminal investigations

56. Police does not just investigate criminal offences. It is also responsible for other kinds of investigations, including the identification of missing persons and disaster victims. In

Chapter 10: Crime Sample Databank, we explain that it can be difficult for police officers to know at the outset whether an investigation involves criminal offending. If there is no clear indication that criminal offending is involved, the known person databank and the CSD probably cannot be used for identification purposes.

57. However, as previously noted, Australia, Canada and Ireland have established DNA database systems that include indices for DNA profiles from unidentified human remains and relatives of missing persons. The rules around permissible matching prevent these DNA profiles from being inappropriately matched to unrelated crime scenes profiles. In a similar vein, the United Kingdom has established the Missing Persons DNA Database.

58. Non-criminal investigations fall outside the scope of our terms of reference, but the option of establishing a DNA database system is one that we put forward in this paper. If this option were preferred, it could be structured to help address the broader issues around missing persons and disaster victim identification.

Part A

Preliminary matters

CHAPTER 1

Introduction

1.1 In July 2016 the Government asked the Law Commission to review the law governing the use of DNA in criminal investigations in New Zealand. The review is primarily focused on the Criminal Investigations (Bodily Samples) Act 1995 (CIBS Act).

1.2 The CIBS Act provides the framework for New Zealand Police to obtain biological samples from suspects in criminal investigations. It also regulates two known person DNA profile databanks that are maintained on behalf of New Zealand Police by the Institute of Environmental Science and Research (ESR).

1.3 The full terms of reference for the review are set out in Appendix 1. As stated in those terms, the purpose of the review is:

> [T]o determine whether the current legislation is fit for purpose and whether it is keeping pace with developments in forensic science, international best practice and public attitudes, in relation to the collection, retention and use of DNA in criminal investigations. The review will also examine whether the Act gives appropriate recognition to both law enforcement values and human rights, including the right to privacy.

1.4 The Law Commission will report to the Minister in 2019.

ORIGINS OF THIS REVIEW

The trend of expanding DNA profile databanks

1.5 Since the mid-1980s, DNA profiling has become an important crime fighting tool worldwide.[1] By comparing DNA found at crime scenes to DNA from known individuals, investigators have been able to identify suspects and rule out innocent people.

1.6 The forensic comparison process generally involves generating DNA profiles. A DNA profile is a unique series of numbers that can be generated by analysing a biological sample (for example blood, saliva or skin cells). If a DNA profile generated from a biological sample found at a crime scene is the same as a DNA profile from a known individual, there is a high likelihood that the same person was responsible for both samples. This can be very important information in a criminal investigation.

[1] DNA profiling was first used in a serious criminal investigation in the United Kingdom in 1986. The Pitchfork case involved the rape and murder of two 15-year-old girls, three years apart, and other serious and violent offending. DNA was used to exonerate the person originally arrested for one of the murders and to implicate Colin Pitchfork. The police had organised mass screening of local males in 1987 and later discovered that Mr Pitchfork had bribed another person to provide a blood sample on his behalf. Mr Pitchfork was arrested, confessed and pleaded guilty to the murders and other charges. A summary of the facts is contained in *R v Pitchfork* [2009] EWCA Crim 963 at [4]–[11]. The United Kingdom established the world's first DNA profile databank in 1995. New Zealand followed suit a few months later that same year.

1.7 Initially, DNA profiling was only used within the confines of individual cases. However, from 1995 onwards, several countries, including New Zealand, established DNA profile databanks to capitalise on this developing science.[2] By creating crime scene databanks containing DNA profiles associated with unresolved crimes and known person databanks containing DNA profiles from known individuals (commonly those convicted of serious offending), investigators could conduct a wide-ranging forensic comparison process.

1.8 The international trend over the last 20 years has been for DNA profile databanks to expand. This has occurred in three ways. First, more information is being included in each DNA profile. Second, the number of profiles contained in crime scene databanks has increased. Scientists can now generate DNA profiles from a broader range of crime scene samples and can do so more cheaply. Third, the number of profiles held on known person databanks has increased as countries have enabled the collection and analysis of biological samples from more known individuals.

1.9 In respect of known individuals, countries first focused on collecting and retaining DNA profiles from convicted sexual and violent offenders.[3] Over time, several countries began collecting DNA profiles in respect of less serious offending as well. Some also collected it earlier in criminal proceedings, at the point when individuals were arrested or charged. The result is that more people have ended up with their DNA profiles on known person databanks. At the farthest end of the spectrum, Kuwait passed a law in 2015 requiring all of its citizens to provide DNA samples for a national known person databank.[4] This law has been successfully challenged in Kuwait's Constitutional Court where it was ruled unconstitutional.[5]

New Zealand's expanding use of DNA: legislative changes in 2009

1.10 New Zealand has followed the international trend of expansion. The CIBS Act established a known person databank in 1996, and the collection criteria for the databank were expanded in 2003 and again in 2009.[6] The 2009 changes significantly lowered the threshold so that biological samples can now be obtained from any adult that a police officer intends to charge with an imprisonable offence or the offence of peeping and peering.[7] The term "imprisonable offence" covers a wide range of behaviour from murder to wilfully opening a letter that is not addressed to you. These changes mean that, if a police officer intends to charge an individual with an imprisonable offence, the officer has

2 It appears that there are now around 64 countries that have operational forensic DNA databases. See <http://dnapolicyinitiative.org/wiki/index.php?title=Global_summary>.

3 Martin PD and others "A brief history of the formation of DNA databases in forensic science within Europe" (2001) 119 Forensic Science International 225 at 229.

4 Kuwait Law No 78/2015 on DNA.

5 Andy Coghlan "Kuwait to change law forcing all citizens to provide DNA samples" *New Scientist* (online ed, London, 21 October 2016); and Jaber Al-Hamoud "High Court Rules Against Controversial Law on DNA: 'Articles Violate Constitution'" (6 October 2017) Arab Times <www.arabtimesonline.com/news/>.

6 The Criminal Investigations (Blood Samples) Act was passed in 1995 and amended by the Criminal Investigations (Bodily Samples) Amendment Act 2003 and Criminal Investigations (Bodily Samples) Amendment Act 2009.

7 Criminal Investigations (Bodily Samples) Act 1995, s 24J. An imprisonable offence is any offence that can be punished by a term of imprisonment. For example, the following offences are imprisonable as they can be punished by imprisonment for up to three months: disorderly behaviour; wilful damage; intimidation, seeking donations by false pretence; resisting Police; indecent exposure; possession of cannabis; theft if the value of stolen property is less than $500; depositing dangerous litter without consent; wilful breaking of bottles in public places and wilfully opening a postal article not addressed to you. However, it would be rare (if it has occurred at all) for the courts to sentence an individual to a term of imprisonment for committing one of these offences.

the power to require a biological sample and the individual must comply. There is no court oversight of the exercise of these powers.[8] These changes were quickly moved through Parliament as part of the (then) Government's post-election 100-day reform programme.

1.11 At the time, the (then) Attorney-General reported to Parliament that, in his view, the 2009 changes would be inconsistent with section 21 of the New Zealand Bill of Rights Act 1990 (NZBORA), which protects against unreasonable search and seizure.[9] Parliament decided to pass the legislation in any event.[10] However, the Attorney-General's concerns and general concerns about the speed with which the Act had been passed and its cost implications prompted Cabinet to agree to a future review of the Act's operation.[11] It also led to Police and the Ministry of Justice developing operational guidelines on how police officers should exercise these new powers.[12]

Growing international debate

1.12 The Attorney-General's report highlighted a 2008 decision of the European Court of Human Rights, *S & Marper v United Kingdom*.[13] In *S & Marper*, the Court held that aspects of the United Kingdom's DNA profile databank regime violated the right to a private life and family life as protected by the European Convention on Human Rights.[14] This decision led to major law reform in the United Kingdom.[15] The litigation also fuelled wider debates in the United Kingdom around the legal and ethical implications of both DNA profile databanks and of emerging DNA analysis techniques, including forensic DNA phenotyping and familial searching.[16]

8 This is discussed in more detail in Chapter 11.

9 Christopher Finlayson *Report of the Attorney-General under the New Zealand Bill of Rights Act 1990 on the Criminal Investigations (Bodily Samples) Amendment Bill (2009)* (10 February 2009).

10 The legislation passed with 108 ayes and 14 noes: (28 October 2009) 658 NZPD 7506.

11 Ministry of Justice and Treasury *Criminal Investigations (Bodily Samples) Amendment Bill 2009: Regulatory Impact Statement* (February 2009), which stated at 5:

> It is proposed that the Ministry of Justice undertake a review of the Criminal Investigations (Bodily Samples) Act 1995 to review the operational and cost effectiveness of the entire Act, any amendments made, any advances in technology, and the impact of the legislation on population groups including Māori. This review should be completed by August 2011.

This review was delayed and then ultimately referred to the Law Commission. See our terms of reference at Appendix 1.

12 Police Manual – the operational guidelines are set out in the chapter on DNA sampling. This guidance is discussed in Chapter 11. The Police Manual consolidates New Zealand Police rules and policy, including relevant law, and contains numerous individual chapters on each aspect of policing. It contains standard operating practice, principles and procedure that should be followed, although Police may work outside this standard operating practice where it is justified to do so. The Police Manual is in the form of an electronic database and is not available in hard copy. In this issues paper, we cite the chapter name and page reference from the electronic database.

13 *S and Marper v The United Kingdom* [2008] 5 ECHR 167 (Grand Chamber). We discuss this case in further detail in Chapter 11.

14 Formerly known as the Convention for the Protection of Human Rights and Fundamental Freedoms (signed 4 November 1950, entered into force 3 September 1953). Article 8 provides:

> Right to respect for private and family life:
>
> 1. Everyone has the right to respect for his private and family life, his home and his correspondence.
>
> 2. There shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society in the interests of national security, public safety or the economic well-being of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others.

15 This culminated in the Protection of Freedoms Act 2012 (UK).

16 Forensic DNA phenotyping and familial searching are discussed in Chapters 6 and 13, respectively. For the wider debate, see Nuffield Council on Bioethics *The forensic use of bioinformation; ethical issues* (September 2007); and

1.13 Similar debates in the United States were fuelled by the 2013 case of *Maryland v King*.[17] In a split decision (5:4), the United States Supreme Court found that Maryland's DNA profile databank regime was constitutional. The majority held that Maryland's policy of obtaining biological samples from persons arrested for serious criminal offending was justified as a "routine booking procedure" to confirm identity and inform bail decisions.[18] The potential use of the DNA profile databank as an investigative tool was only mentioned in passing. The dissent, on the other hand, focused on the use of the databank as an investigative tool, finding that Maryland's policy was unconstitutional on the basis that it amounted to routine suspicionless searches of arrested persons primarily for investigative purposes in relation to other offending. The dissenting opinion revealed a deep division in the views of the Court and described the majority's reasoning as "tax[ing] the credulity of the credulous".[19]

THE LAW COMMISSION'S APPROACH

1.14 In preparing this issues paper, the Law Commission has engaged with a wide range of stakeholders. We held a number of meetings with Police and ESR, the two agencies that use the CIBS Act on a day-to-day basis. We established two advisory groups, one of experts and one of officials, with whom we met twice. Our Māori Liaison Committee convened a sub-committee to consult with us. We attended the Australian and New Zealand Forensic Sciences Symposium in 2016. We also met with more than 30 other interested parties, including academics specialising in law and social sciences, and experts from Australia, Canada and the United Kingdom. We also created a website to inform and engage with the public.

1.15 During these initial discussions, a consensus emerged. It is time for a new Act. The CIBS Act is based on outdated science. Multiple amendments to implement conflicting policies have made it complex and inaccessible. We set out the history of the CIBS Act and why we think it should be repealed in Chapter 4. The rest of our issues paper sits on this premise that it is time for a new Act. The chapters that follow on from Chapter 4 then explore the more contested question: What should a new Act say?

Who is this issues paper for?

1.16 Our primary audience is those who work in the criminal justice sector or in related scientific, academic or legal fields. We have included a series of questions in this paper aimed at this audience. We seek submissions on these questions and any other feedback to improve our understanding of how DNA is currently used in criminal investigations and where the main issues and opportunities for improvement lie.

United Kingdom Human Genetics Commission *Nothing to hide, nothing to fear? Balancing individual rights and the public interest in the governance and use of the National DNA Database* (November 2009).

17 *Maryland v King* 569 US 435 (2013).

18 *Maryland v King* 133 S.Ct. 1958 (2013) at 440 per Kennedy J.

19 *Maryland v King* 133 S.Ct. 1958 (2013) at 466 per Scalia J.

1.17 However, a number of the central issues raise significant ethical questions for our society and would benefit from more extensive public debate. These issues are addressed in this paper, which will be publicly available. We are also relaunching an updated website aimed at generating discussion and seeking public submissions and feedback on broader ethical questions. The website is available at https://dna-consultation.lawcom.govt.nz. Submissions are due by 31 March 2019.

1.18 The submissions and feedback we receive in response to this paper and our website will inform our final report to the Minister of Justice, which we intend to publish in the latter half of 2019. The report will contain our recommendations for reforming the law in this area.

STRUCTURE OF THIS PAPER

1.19 This issues paper is divided into the following four parts:

(a) **Part A:** This part deals with preliminary and conceptual matters. It consists of this introduction and Chapters 2 to 4. Chapter 2 outlines the objectives of our review. These provide the conceptual framework we have used to analyse what is wrong with the current law and how it could be improved. Chapter 3 explains the current and emerging DNA analysis techniques used by ESR. Chapter 4 outlines why the starting point for our issues paper is that it is time for a new Act.

(b) **Part B**: This part and Part C frame the main issues that we have identified so far and propose various options for reform. The focus of Part B is on casework. How is DNA used in individual criminal investigations? This part looks at: crime scene examinations (Chapter 5); the analysis of crime scene samples in isolation (that is, without comparing the sample to another), otherwise known as forensic DNA phenotyping (Chapter 6); the comparison of crime scene samples to reference samples, known as forensic comparison (Chapter 7); direct collection of reference samples from suspects and non-suspects (Chapter 8); and indirect sampling methods (Chapter 9).

(c) **Part C:** The focus of Part C is on DNA profile databanks. How are the databanks used to help resolve criminal investigations? Part C begins with a discussion of the Crime Sample Databank in Chapter 10. The next chapters explore issues and options in relation to the known person databank: the collection criteria (Chapter 11) and use of the databank (Chapter 12), including familial searching (Chapter 13).

(d) **Part D**: Part D looks at two overarching issues: the retention of biological samples and DNA profiles (Chapter 14) and oversight (Chapter 15). In several places in this issues paper, we suggest that there is a need for greater oversight of how DNA is used in criminal investigations. Chapter 15 pulls these suggestions together and looks at the various different forms this increased oversight might take.

1.20 Research for this issues paper was completed as at 31 October 2018. Data in this issues paper is current as at 30 June 2018.[20] Relevant updates will be included in the final report.

1.21 We note that much of our research has been informed by information and documentation provided to us by Police and ESR, including information set out in the Forensic Science Services Agreement between Police and ESR 2018-2021. As some of these documents have been provided to us on a confidential basis or are commercially sensitive, we are unable to quote from them. We have provided references where possible.

[20] We note for completeness the decision of the Supreme Court in *Attorney-General v Taylor* [2018] NZSC 104, delivered on 9 November 2018 while we were preparing for publication. In that decision, the Supreme Court confirmed the jurisdiction of the High Court to make a declaration that legislation is inconsistent with the New Zealand Bill of Rights Act 1990.

CHAPTER 2

Framework for analysis

INTRODUCTION

2.1 The *Legislation Guidelines* that have been approved by Cabinet identify three core objectives for all high-quality law in New Zealand: legislation should be fit for purpose; constitutionally sound; and accessible.[1] These three objectives are also at the heart of our terms of reference. That is because, when the terms of reference were agreed, there was evidence to suggest that the Criminal Investigations (Bodily Samples) Act 1995 (CIBS Act) might be deficient in all three areas.

2.2 We have used the objectives articulated in the *Legislation Guidelines* as a starting point to develop the framework for analysis of the current law and practice relating to the use of DNA in criminal investigations. By knowing what kind of legislation we want, it is possible to identify what the current issues are and what appropriate options for reform might look like.

2.3 In this chapter, we explain what we consider "fit for purpose", "constitutionally sound" and "accessible" to mean in the context of our review. In doing so, we draw on our terms of reference,[2] the *Legislation Guidelines* and relevant Law Commission reports and study papers concerning search and surveillance, privacy and tikanga Māori.[3]

2.4 In Chapter 4, we use this framework for analysis to provide a high-level overview of why we consider that the CIBS Act should be repealed and replaced by new legislation.

2.5 In Chapters 5 to 14, we examine the CIBS Act in more detail and look at the wider law and practices governing the use of DNA in criminal investigations. We identify the areas where change is needed and put forward options for improvement. In doing so, we again focus on the three core objectives that we explore in this chapter.

1 Legislation Design and Advisory Committee *Legislation Guidelines* (March 2018) at 8.

2 The terms of reference are set out at Appendix 1.

3 Law Commission *Review of the Search and Surveillance Act 2012: Ko te Arotake i te Search and Surveillance Act 2012* (NZLC R141, 2017); Law Commission *Search and Surveillance Powers* (NZLC R97, 2007); Law Commission *A Conceptual Approach to Privacy* (NZLC IP19, 2007); Law Commission *Privacy Concepts and Issues: Review of the Law of Privacy Stage 1* (NZLC SP19, 2008); Law Commission *Converging Currents: Custom and Human Rights in the Pacific* (NZLC SP17, 2006); and Law Commission *Māori Custom and Values in New Zealand Law* (NZLC SP9, 2001).

FIT FOR PURPOSE

2.6 The *Legislation Guidelines* explain that to be fit for purpose, legislation should:[4]

(a) have a clearly defined purpose that has been robustly tested, which means there must be evidence to suggest that the legislation is capable of achieving the identified purpose;[5]

(b) provide certainty as to rights and obligations, but also build in sufficient flexibility to enable it to last;

(c) be comprehensive enough to deal with likely scenarios; and

(d) work effectively within wider regulatory systems and integrate with the existing body of law.

2.7 We now consider each of these points as they relate to the CIBS Act.

(a) A clear purpose, robustly tested

2.8 We do not think that the purpose of the CIBS Act is clear at present.[6] There is also considerable room for debate as to what its purpose should be. Given that this is a central issue in our paper, it is worth briefly outlining some of the difficulties in this chapter.

2.9 The long title explains what the CIBS Act does. It enables police officers to obtain biological samples from known persons and it authorises the establishment of the known person databank. The databank of information derived from analysis of those samples may then be used in criminal investigations. There is nothing in the CIBS Act to explain why it was passed by Parliament. What did Parliament hope to achieve? Were there competing interests it intended to reconcile, and how did it intend to do that?[7]

2.10 The Parliamentary debates and surrounding documents that make up the legislative history of the CIBS Act indicate that by passing and later amending the Act, Parliament intended to:

4 Legislation Design and Advisory Committee *Legislation Guidelines* (March 2018) at 8.

5 For a discussion on the desirability of purpose provisions in statutes, see Law Commission *Reforming the Law of Contempt of Court: A Modern Statute* (NZLC R140, 2017) at 35; Law Commission *Second Review of the Evidence Act 2006: Te Arotake Tuarua i te Evidence Act 2006* (NZLC IP42, 2018) at 32; and Law Commission *Review of the Search and Surveillance Act 2012: Ko te Arotake i te Search and Surveillance Act 2012* (NZLC R141, 2017) at 60–61.

6 Legislation Design and Advisory Committee *Legislation Guidelines* (March 2018) at 11 explains the importance of a purpose provision as follows:

> The purpose of the legislation will continue to have an ongoing key function once the legislation is enacted as it will govern how regulators organise themselves and exercise powers under legislation, and how the courts interpret the legislation. A well-articulated purpose should be capable of explaining the regime, guide interpretation of its provisions when there is uncertainty, and act as a test for decision making.

7 By way of comparison, the purpose provision in the Search and Surveillance Act 2012, s 5 states:

> The purpose of this Act is to facilitate the monitoring of compliance with the law and the investigation and prosecution of offences in a manner that is consistent with human rights values by—
>
> (a) modernising the law of search, seizure, and surveillance to take into account advances in technologies and to regulate the use of those technologies; and
>
> (b) providing rules that recognise the importance of the rights and entitlements affirmed in other enactments, including the New Zealand Bill of Rights Act 1990, the Privacy Act 1993, and the Evidence Act 2006; and
>
> (c) ensuring investigative tools are effective and adequate for law enforcement needs.

(a) improve identification and prosecution of offenders, particularly sexual and serious violent offenders;[8]

(b) enable early elimination of suspects and exoneration of innocent people;[9]

(c) deter criminal offending;[10] and

(d) reduce the costs of Police, due to the swift and reliable nature of DNA profiling.[11]

8 The following comments were made during the Parliamentary Debates on the Criminal Investigations (Bodily Samples) Act 1995 and its subsequent amendments: (29 November 1994) 545 NZPD 5191: Hon D A M Graham (Minister of Justice):

> I now turn to the obtaining of blood samples for the databank … The databank will be used to store the DNA profiles of persons convicted of the serious offences mentioned in the schedule. The focus is on offenders who have committed, and may well commit again, the type of sexual or violent offence in respect of which a bodily sample could be left at the scene.

And at (12 October 1995) 551 NZPD 9725: Warren Kyd (Hauraki):

> [This Bill] will provide much better evidence that will stand up in court. I believe that the police will be able to prosecute cases with much more certainty, and are likely to get a much higher conviction rate because of these tests …

And at (14 October 2009) 658 NZPD 7069: Kanwaljit Singh Bakshi (National):

> Current technology allows bodily samples like blood, saliva, and semen to be processed and reassembled in the form of a barcode that can be matched with other samples taken from crime scenes. This procedure is an important investigative tool, resulting in virtually conclusive proof of identity.

9 The following comments were made during the Parliamentary Debates on the Criminal Investigations (Bodily Samples) Act 1995 and its subsequent amendments: (14 October 2009) 658 NZPD 7066: Simon Bridges (National):

> More accused who would otherwise have been in the frame for crime will … be excluded through this technology. They will be excluded and there will be more rightful convictions. We have high-profile examples of the ultimate exclusion following wrongful convictions of people through the powerful use of DNA. One example is David Dougherty in New Zealand … It was only through advances in DNA that he was freed.

And at (9 August 1995) 549 NZPD 8574: Warren Kyd (Hauraki):

> It is very important that the police should have the right to take samples, because so often the one person who will not give a sample is the person who carried out the crime … Samples can enable the police to eliminate [suspects], and quickly get on to the narrow band of people who are more likely to have committed the crime but will not give samples.

And at (18 September 2002) 602 NZPD 671: Dr Wayne Mapp (NZ National – North Shore):

> … it is a matter of the integrity of the criminal law, and our faith in it, that we have the certainty that the person arrested, charged, tried, and convicted is, in fact, the person who committed the crime. The DNA sample provides that chain of evidence – that link. It goes both ways. There have been numerous cases when, firstly, people have been arrested because the DNA samples proved they committed the crime; and, secondly, and equally important, people have been acquitted because the DNA samples proved conclusively they were not the people who committed the crimes.

10 Deterrence is a recurring theme in the Act's legislative history. Then Minister of Justice Douglas Graham stated that a central purpose of the Act was that "convicted offenders may be deterred from future offending if there is a high chance of apprehension because their DNA profile is in the databank." Douglas Graham *Memorandum for Cabinet Social and Family policy Committee: Enforcement, prosecution and Sentencing: Part G Obtaining Blood Samples from Certain Convicted Offenders for the Purpose of a DNA Databank* (July 1994), at 2. Deterrence is also often cited in Parliamentary Debate. At (10 August 1995) 549 NZPD 8634: Hon Jenny Shipley:

> … it is my opinion that the greatest benefit from this legislation may well prove to be that it will deter some men … who are potential rapists, and will cause them to weigh up the risk of being involved in a crime against the much greater risk of being caught and convicted than has been the case in the past.

And at (21 October 2013) 612 NZPD 9471: Edwin Perry (NZ First): "I believe that this tool will prevent criminal activity. Criminals will now know that crime will not be so easy to get away with."

11 Reducing police costs and increasing the efficacy of policing was a central purpose of the Act: Douglas Graham *Memorandum for Cabinet Social and Family policy Committee: Enforcement, prosecution and Sentencing: Part G Obtaining Blood Samples from Certain Convicted Offenders for the Purpose of a DNA Databank* (July 1994), at 2:

> Police resources in the investigative process will be saved, swift apprehension of the offender will be possible, and there will be minimal interference with the lives of suspects eliminated from the enquiry.

This theme was reiterated in the Parliamentary Debates on the Act and its subsequent amendments: (10 August 1995) 549 NZPD 8628: Hon John Luxton (Minister of Police):

> … many suspects who would require extensive investigation by the police can be ruled out very, very quickly if a blood sample is taken and a DNA test run on it. In many ways taking samples will free up police work, speed up police work, and take suspects off the wanted list … much faster.

And at (18 September 2002) 602 NZPD 670: Edwin Perry (NZ First): "With the passing of this bill, the police will be empowered to solve crimes in a more efficient manner, and the financial savings will be substantial."

2.11 Below we consider whether each of these four objectives is realistic and appropriately recognised in the CIBS Act.

Identification and prosecution of offenders

2.12 DNA profiling has been used to identify and prosecute offenders who would otherwise not have been caught. There have been some high-profile cases. For instance, in 2002, Jules Mikus was found guilty of abducting, raping and murdering Teresa Cormack in 1987.[12] The turning point in the investigation came in 2001 when scientists obtained a usable DNA profile from semen found on Teresa Cormack's body. Similarly, DNA profiling linked Jarrod Mangels to the murder of Maureen McKinnel, 16 years after her death. He pleaded guilty to the charge.[13]

2.13 The value of DNA profiling stems from its reliability. It has long been described as the "gold standard" of forensic science – a status largely reinforced in a 2016 report by the United States President's Council of Advisors on Science and Technology (PCAST). The PCAST report was highly critical of many fields of forensic science but found that the vast majority of DNA profiling used "an objective method in which the laboratory protocols are precisely defined and the interpretation involves little or no human judgment".[14]

2.14 There are, however, limits to the utility of DNA profiling. First, even if the methodology is sound, there is always room for human error. Second, DNA evidence is not always relevant. As leading experts in the United Kingdom and Europe have stated:[15]

> Such is the power of DNA to identify, convict, and exonerate, that many perceive it to be infallible. Yet DNA evidence has a number of limitations: it might be undetectable, overlooked, or found in such minute traces as to make interpretation difficult. Its analysis is subject to error and bias. Additionally, DNA profiles can be misinterpreted, and their importance exaggerated … Even if DNA is detected at a crime scene, this doesn't establish guilt. Accordingly, DNA needs to be viewed within a framework of other evidence, rather than as a standalone answer to solving crimes.

2.15 This is an important point to keep in mind, especially when assessing how valuable DNA profiling is in identifying and prosecuting sexual and violent offenders.

2.16 A common misconception is that DNA is central to almost all sexual assault investigations.[16] This is not the case. Research suggests that, in the vast majority of rape cases, the alleged offender was previously known to the complainant.[17] Where there is a

12 Institute of Environmental Science and Research *A Brief History of Forensic DNA 1990-2010: Marking 20 years of DNA analysis for the New Zealand criminal justice system* (February 2010).

13 Institute of Environmental Science and Research *A Brief History of Forensic DNA 1990-2010: Marking 20 years of DNA analysis for the New Zealand criminal justice system* (February 2010).

14 President's Council of Advisors on Science and Technology *Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods* (Executive Office of the President, September 2016) at 7. For further discussion on this point see Chapter 5.

15 Sense About Science and EUROFORGEN *Making Sense of Forensic Genetics: What can DNA tell you about a crime?* (2017) at 6.

16 A New Zealand phone survey found that 85.5 per cent of respondents considered that DNA evidence would be vital or important in coming to a decision as to whether a defendant was guilty or not guilty in a trial for a sexual offence: Cate Curtis "Public Understandings of the Forensic Use of DNA: Positivity, Misunderstandings, and Cultural Concerns" (2014) 34 BSTS 21 at 24–30.

17 See Sue Triggs and others *Responding to sexual violence: Attrition in the New Zealand criminal justice system* (Ministry of Women's Affairs, Wellington, 2009) at 17–20. This study surveyed 1,955 police files coded as sexual violation of an adult victim between 1 July 2005 and 31 December 2007. The relationship between the victim and the alleged offender

clear suspect from the start, there is no need to search a known person databank. There may also be little point in obtaining a DNA sample from the suspect unless the complainant underwent a medical examination shortly after the incident. If there was no medical examination, DNA profiling would not assist in resolving the case. Furthermore, in many cases of sexual offending there is no dispute as to whether sex occurred. The issue is consent. Again, in those circumstances, DNA profiling would usually be of limited relevance.[18]

2.17 There are similar misconceptions around investigations into serious violent offending.[19] Often identity is known at the outset, and the case will turn on whether the alleged offender intended to cause the resulting injuries.

2.18 These misconceptions are sometimes attributed to the so-called "CSI effect".[20] This is a theory that popular television dramas, like *CSI: Crime Scene Investigation*, create unrealistically high public expectations about the ability of forensic science to swiftly and reliably solve any case. Notably, the investigations depicted in these dramas almost invariably involve sexual and/or violent offending.

2.19 Beyond the high-profile cases, it is difficult to find information about how DNA profiling is currently being used to identify and prosecute offenders.[21] However, from the information we do have, it is plain that DNA profiling may be particularly effective when investigating property offending.

2.20 Of the DNA profiles currently on the Crime Sample Databank, 76 per cent relate to non-suspect volume crime cases. This is the term used by Police to describe cases involving general theft, burglary or vehicle crime (unlawful taking of, and/or theft from, vehicles) where no suspect sample is available for comparison. This may seem surprising, but it makes sense.[22] The central question in property crime investigations is often: who committed the offence? Commonly, complainants have no idea as to the answer.

was recorded for 73 per cent of the cases. Of those cases, only 16 per cent involved rape by a stranger. The authors note that this figure aligns with similar research conducted into rape by strangers in the United Kingdom (14 per cent) and Australia (16-24 per cent). This suggests that in around 80 per cent of the rape complaints investigated by police, the alleged offender is identified at the outset.

18 In some criminal investigations where the central issue is whether sex occurred consensually, DNA profiling may have been relevant to the suspect's decision not to dispute whether sex occurred at all.

19 Cate Curtis "Public Understandings of the Forensic Use of DNA: Positivity, Misunderstandings, and Cultural Concerns" (2014) 34 BSTS 21 at 29 also found that 72.2 per cent of respondents considered that DNA evidence would be vital or important in coming to a decision as to whether a defendant was guilty or not guilty in a trial for a major assault.

20 Cate Curtis "Public Understandings of the Forensic Use of DNA: Positivity, Misunderstandings, and Cultural Concerns" (2014) 34 BSTS 21 at 21–22.

21 The Act originally required Police to report on the number of prosecutions instituted where evidence from a DNA profile was adduced, together with the results of the prosecutions. As far as we can ascertain, this information was only reported in 1998, when 47 prosecutions were recorded. The results of these prosecutions were reported as "not available". Since changes to the Act in 2003, section 76(1)(d) of the Criminal Investigations (Bodily Samples) Act 1995 has required Police to report annually how often DNA profiling evidence obtained under a Part 2 procedure is presented at trial and the number of persons who have had a conviction entered against them as a result of the trial. In both the 2003/2004 and 2004/2005 years, Police recorded seven cases and seven convictions: New Zealand Police Annual Report 2003-2004 (October 2004) and New Zealand Police Annual Report for the year ended 30 June 2005 (October 2005). In 2006/2007 this was reported as 23 cases and 14 convictions: New Zealand Police Annual Report 2006-2007 (October 2007). Since then, no figures have been reported. The annual reports have stated that the information is "not captured nationally". Even were Police able to fulfil the reporting requirements, these requirements would not indicate whether the DNA evidence was pivotal in the conviction.

22 Cate Curtis' study found that only 28 per cent of respondents considered that DNA evidence would be vital or important in coming to a decision as to whether a defendant was guilty or not guilty in a trial for a major theft and 15.3

2.21 When the CIBS Act first came into force, DNA profiling was not as effective in answering this question because, at the time, a relatively large biological sample was required in order to generate a profile. For instance, a semen or blood stain needed to be the size of a 50 cent piece. By contrast, it is now possible for the Institute of Environmental Science and Research (ESR) to generate a DNA profile from a biological sample as small as the traces of skin left in a fingerprint.

2.22 In light of these observations, we question whether the focus of the CIBS Act should now be broader than the original objective of identifying and prosecuting serious sexual and violent offenders.[23] As noted at [2.6(a)], for legislation to be fit for purpose, there must be evidence to suggest that it is capable of achieving the identified purpose. It may therefore be better simply to focus on identifying and prosecuting offenders for a range of serious crimes. A seriousness threshold would be necessary to recognise the fact that DNA profiling comes at a constitutional cost, as we discuss at [2.42] to [2.88].

Elimination of suspects and exoneration of innocent people

2.23 Regarding Parliament's second aim of eliminating suspects and exonerating the innocent, there are high-profile cases in New Zealand that demonstrate how DNA profiling can exonerate the wrongfully convicted. The cases of Teina Pora, David Dougherty and Aaron Farmer are the most prominent.[24]

2.24 We question whether the CIBS Act is currently structured in a way that makes the most of the potential of DNA profiling to exculpate – either during investigations or after conviction.

2.25 The CIBS Act alludes to this potential:

(a) The suspect sampling provisions specifically state that a sample may be taken "to confirm or disprove" the suspect's involvement in the offending.[25] Once a suspect sample is taken, the provisions require the officer to offer to take a second sample to allow the suspect to have it independently analysed.[26] Police advises that, at most, it receives three or four requests a year for a second sample.

(b) Similarly, the CIBS Act provides that, if the suspect requests it and it is practicable, part of the crime scene sample should be made available for independent

per cent for a minor theft: Cate Curtis "Public Understandings of the Forensic Use of DNA: Positivity, Misunderstandings, and Cultural Concerns" (2014) 34 BSTS 21 at Table 9.

23 The lists of offences in the Schedules to the Criminal Investigations (Bodily Samples) Act 1995 are almost entirely sexual and violent offences, plus certain offences that are perceived to be precursors to sexual and violent offending. However, as we identify later in this issues paper, arguably the focus is now broader than sexual and violent offences, due to the changes to the Criminal Investigations (Bodily Samples) Act 1995 in 2009. Those changes allow samples to be obtained (in the case of adults) not only for offences listed in the Schedules but for all imprisonable offences.

24 Teina Pora was arrested in 1993 and convicted of the rape and murder of Susan Burdett in 1994. DNA evidence obtained from Ms Burdett's body was linked to another man. This DNA evidence was later relevant when the Privy Council quashed Mr Pora's conviction in 2015. David Dougherty was convicted of kidnapping and raping an 11-year-old girl in 1993. However, new DNA evidence led to a retrial in 1997 where Mr Dougherty was acquitted. Aaron Farmer was convicted of raping a 22-year-old woman in 2003. After a successful appeal, the retrial ordered did not proceed as new DNA evidence excluded Mr Farmer as the rapist.

25 Criminal Investigations (Bodily Samples) Act 1995, s 16(1)(c). This language reflects an assumption that the person was involved in the offending. Further, it may overestimate the value of the forensic comparison. A match would not necessarily "confirm" that the person was involved in offending. It would only show a link to the crime scene. Equally, the absence of a match would not necessarily "disprove" the person's involvement.

26 Criminal Investigations (Bodily Samples) Act 1995, ss 55(1), 56(b) and 56A(2)(b).

analysis.[27] ESR advises that it receives very few such requests, although it does not collect exact numbers.

2.26 The main problem with these provisions is that the Act does not contain the additional procedures and infrastructure that would seem necessary to promote exculpatory DNA profiling. In Chapters 5 and 8, we explore ways in which this objective could be recognised more appropriately in the legislation.

Deterrence of criminal offending

2.27 Whether DNA profile databanks have any deterrent effect on criminal offending – Parliament's third aim – is debatable. Some studies suggest that, to the extent databanks deter offending at all, the effect is minimal, whilst others claim a significant deterrent effect. It appears that the methodology employed informs the outcome.[28]

2.28 The studies that cast doubt on the deterrent effect explain that deterrence hinges on offenders undertaking a cost-benefit analysis before choosing to offend. This typically does not happen, especially in the context of spontaneous violent offending.[29] Even when this mental calculation does occur, offenders often do not appreciate that DNA evidence increases the risk of apprehension.[30] The studies note that, alternatively, offenders may believe they can avoid forensic detection by employing countermeasures.[31] Some research even suggests that retaining DNA profiles creates barriers for the rehabilitation of offenders, which may increase the risk of recidivism for some individuals.[32] However, as noted, other studies take a different view.

2.29 It is our preliminary view, therefore, in light of the inconclusive research, that it is unrealistic to include deterrence as one of the main objectives of the CIBS Act or any replacement legislation.

27 Criminal Investigations (Bodily Samples) Act 1995, s 57(1).

28 Avinash Bhati and Caterina G Roman "Evaluating and Quantifying the Specific Deterrent Effects of DNA Databases" (2014) 38 Eval Rev 68 at 86–88. For a contrary view, see Jennifer L Doleac "The Effects of DNA Databases on Crime" (2017) 9 AEJ: Applied Economics 165 at 166–167; and Anne Sofie Tegner Anker, Jennifer L Doleac, and Rasmus Landersø "The Effects of DNA Databases on the Deterrence and Detection of Offenders" [2017] SSRN Electronic Journal at 24. These latter two studies found a high degree of deterrence. Dr Russil Durrant, a criminologist based at Victoria University of Wellington, reviewed these three articles for the Law Commission. He concluded that the literature, as it stands, does not allow any clear conclusions to be drawn about the potential deterrent effect of DNA databases, as each study has used different methodologies, each producing different results. He noted that the results are not too dissimilar to research that has examined the putative deterrent effects of policy changes such as the death penalty and three-strikes laws in the United States where there are also highly variable findings, which appear to be strongly influenced by the specific methodology employed.

29 Nessa Lynch and Liz Campbell *The Collection and Retention of DNA from Suspects in New Zealand* (Victoria University Press, Wellington, 2015) at 59.

30 Marie-Amélie George "Gendered Crime, Raced Justice: A Critical Race Feminist Approach to Forensic DNA Databank Expansion" (2005) 19 Nat'l Black LJ 78 at 87 found that databanks are not a deterrent as humans are cognitively biased "towards optimism and overconfidence" and "underestimate the likelihood of a future negative outcome".

31 See Carlos Jordi "Diminished Returns: The Exorbitance of Collecting DNA from all Arrestees" (2015) 26 St Thomas L Rev 346 at 367–368, n 191 where the author notes that offenders avoid detection in a number of ways such as intentionally contaminating DNA evidence so that it is unreadable by forensic scientists and avoiding leaving cigarette butts in the vicinity of their offending.

32 Jason Tarricone "'An Ordinary Citizen Just Like Everyone Else': The Indefinite Retention of Former Offenders' DNA" (2005) 2 CRCL 209 at 243–254. See also Nessa Lynch and Liz Campbell *The Collection and Retention of DNA from Suspects in New Zealand* (Victoria University Press, Wellington, 2015) at 60.

Reduced Police costs

2.30 Very little data is routinely collected and analysed to show how efficient the CIBS Act is in achieving the objectives of identifying and prosecuting offenders and of eliminating other persons of interest. For example, the number of matches between the Crime Sample Databank (CSD) and the known person databank is reported annually, but there is no data on how often these matches assist in resolving the associated criminal investigations.

2.31 Therefore, in terms of Parliament's fourth aim, the lack of data makes it especially difficult to assess whether DNA profiling is a cost-effective tool for Police. We are continuing to work with Police and ESR to collate relevant data to determine how efficient the current system is.

Summary: What should the legislative purpose be?

2.32 Our preliminary view is that the greatest benefit of DNA profiling is its ability, in certain cases, to inculpate offenders and exculpate others in a manner that has been robustly tested. Our goal in this review is to consider how to maximise that benefit in a way that is constitutionally sound. This requires legislation that is not overly restrictive, but as we discuss further below, there need to be clear limits in place to ensure constitutional soundness, in particular in relation to consistency with the principles of the Treaty of Waitangi and NZBORA. There is also a need for the DNA regime to be transparent and to recognise that DNA profiling is just one tool available to Police. We think that the purpose of regulating the use of DNA in criminal investigations should acknowledge all these factors.

(b) Certain and flexible for the future

2.33 The second factor in assessing fitness for purpose is whether legislation is certain as to rights and obligations, yet sufficiently flexible to enable it to last. The CIBS Act creates search powers for police to collect and use DNA in criminal investigations. In our report *Search and Surveillance Powers*, we noted that:[33]

> To the greatest extent possible, laws creating and regulating search powers should provide certainty to enforcement officers. Certainty ensures that enforcement officers can do their job with confidence. Like complexity, uncertainty can breed risk-aversity in some officers and risk-taking behaviour in others. Furthermore, uncertainty creates a greater likelihood that the exercise of powers will be challenged in court proceedings, with the diversion of resources (both financial and personnel) that entails. The principle of certainty suggests that, as far as possible, search powers should be expressed in explicit and objective terms; tests that require enforcement officers to make subjective judgements are likely to be applied loosely and inconsistently, with the attendant harm to human rights and the likelihood of court challenge.

2.34 The CIBS Act is full of uncertainty. It often requires police officers to make subjective judgements. Officers are empowered to obtain biological samples by consent and by compulsion for the DNA Profile Databank (DPD) and by compulsion for the Temporary Databank,[34] yet the Act does not set out the factors that should inform the decisions as to whether to exercise those powers. Furthermore, key terms like "DNA profile" are not

33 Law Commission *Search and Surveillance Powers* (NZLC R97, 2007) at [2.29].

34 These databanks are discussed in Chapters 11, 12 and 13.

defined in a meaningful way, and neither ESR nor the CSD is even mentioned.[35] There is also no statutory regime for elimination samples.[36] As we explain in this issues paper, there is scope for considerable improvement, particularly in relation to certainty and accessibility of the DNA regime.

2.35 In addition to certainty, however, there is a competing need for flexibility. DNA analysis techniques are evolving at a rapid pace.[37] There are also several different ways in which biological samples could be useful in an investigation. While we can predict the developments on the immediate horizon, there needs to be room in the legislation to accommodate new (and potentially unforeseen) developments. This is one of the biggest challenges for our review. In Chapter 15, we discuss options for independent oversight that are designed to create a workable balance between certainty and flexibility.

(c) Appropriately comprehensive

2.36 Being appropriately comprehensive is the third factor in assessing fitness for purpose as set out by the *Legislation Guidelines.* As indicated at [2.34], there are significant gaps in the CIBS Act. It is not comprehensive. As we explain in Chapter 4, several chapters in this issues paper are dedicated to matters that are not currently covered by the CIBS Act but potentially should be.

(d) Effective within the wider legal system

2.37 The CIBS Act is part of the criminal justice regulatory system. Therefore, to comply with the fourth aspect of fitness for purpose, it must align with related criminal justice legislation, common law principles (including tikanga[38]), the principles of the Treaty of Waitangi, and international treaty obligations. As we discuss later in this chapter this includes the New Zealand Bill of Rights Act 1990 (NZBORA) and related international human rights instruments, the Privacy Act 1993 and the Search and Surveillance Act 2012. It also includes the Policing Act 2008, the Oranga Tamariki Act 1989, the Criminal Records (Clean Slate) Act 2004, the Returning Offenders (Management and Information) Act 2015, the Mutual Assistance in Criminal Matters Act 1992, the Evidence Act 2006 and the Legal Services Act 2011.

2.38 In addition, we note that, in New Zealand, biometric information,[39] including fingerprints, photographs and iris scans,[40] is collected and used by a number of government authorities. A consistent approach to all biometric information may be considered desirable. However, DNA is unique, and as we discuss in Chapter 3, no other biometric information can reveal anywhere near the amount of personal information that is

35 See the Glossary at the beginning of this issues paper.

36 Elimination samples are samples obtained from people such as victims, third parties and investigators. For a further discussion, see Chapter 8.

37 This is discussed in Chapter 3.

38 See *Takamore v Clarke* [2012] NZSC 116, [2013] 2 NZLR 733 at 164 per Tipping, McGrath and Blanchard JJ ("the common law of New Zealand requires reference to … tikanga, along with other important cultural, spiritual and religious values"). See also at [94] and [101] per Elias CJ.

39 Biometrics is the technical term for body measurements and calculations. Biometric information is information obtained from different parts of the body.

40 Iris scans are a method of identifying individuals by recognising the unique patterns present in the irises of one or both eyes.

contained in a DNA molecule at present. Accordingly, the central considerations are markedly different.

2.39 We have also considered whether alignment with health law related to DNA is necessary or desirable. Again, our view is that the central considerations are quite different. In health law, the primary driver is improving the health and well-being of the individual concerned. In contrast, DNA is used in criminal investigations primarily for wider societal benefits.

2.40 Nonetheless, enactments like the Human Tissue Act 2008 provide some assistance in identifying attitudes towards DNA. For instance, part of its purpose provision states:

> The purpose of this Act is to help to ensure that collection or use of human tissue—
>
> (a) occurs only with proper recognition of, and respect for,—
>
> (i) the autonomy and dignity of the individual whose tissue is, before or after his or her death, collected or used; and
>
> (ii) the cultural and spiritual needs, values, and beliefs of the immediate family of that individual; and
>
> (iii) the cultural, ethical, and spiritual implications of the collection or use of human tissue; and
>
> (iv) the public good associated with collection or use of human tissue (whether for health practitioner education, the investigation of offences, research, transplantation or other therapeutic purposes, or for other lawful purposes).

2.41 This suggests that the collection and use of biological samples by the State engages the concepts of autonomy, dignity and the public good. It is also clear that collection and use of these samples will have cultural, ethical and spiritual implications that should be recognised and respected.

Q1 One of our goals is to ensure that legislation regulating the use of DNA in criminal investigations is fit for purpose. It must have a clear purpose that has been robustly tested, be certain and flexible for the future and be appropriately comprehensive and effective for that purpose within the context of the wider criminal justice system. What do you think about the way we have framed this goal?

CONSTITUTIONALLY SOUND

2.42 As noted at the outset of this chapter, the *Legislation Guidelines* set out that well-designed legislation should not only be fit for purpose, but also constitutionally sound. It should reflect the fundamental values and principles of a democratic society.[41] This is the second main goal of our review.

2.43 In relation to those values, the House of Lords has stated:[42]

> It is the first responsibility of government in a democratic society to protect and safeguard the lives of its citizens. That is where the public interest lies. It is essential to the preservation of democracy, and it is the duty of the court to do all it can to respect and uphold that

41 Legislation Design and Advisory Committee *Legislation Guidelines* (March 2018) at 8.

42 *A v Secretary of State for the Home Department* [2004] UKHL 56, [2005] 2 AC 68 at [99].

principle. But the court has another duty too. It is to protect and safeguard the rights of the individual.

2.44 Similarly, the introduction to the New Zealand Cabinet Manual emphasises the importance of preserving democratic values in legislation. It states:[43]

> A balance has to be struck between majority power and minority right, between the sovereignty of the people exercised through Parliament and the rule of the law, and between the right of elected governments to have their policies enacted into law and the protection of fundamental social and constitutional values. The answer cannot always lie with simple majority decision-making. Indeed, those with the authority to make majority decisions often themselves recognise that their authority is limited by understandings of what is basic in our society, by convention, by the Treaty of Waitangi, by international obligations and by ideas of fairness and justice.

2.45 Two major constitutional sources that are discussed at length in the *Legislation Guidelines* are particularly relevant to our review: the Treaty of Waitangi and NZBORA. The Privacy Act 1993 is also highly relevant.

Treaty of Waitangi

2.46 The Treaty of Waitangi is a founding document of government in New Zealand.[44] As with NZBORA, all legislative proposals must be considered for consistency with the principles of the Treaty. All policy and legislative development should comply with the spirit and principles of the Treaty, both procedurally and substantively.[45]

2.47 In a 2015 report, the Waitangi Tribunal considered the principles of the Treaty in the criminal justice context in a claim about whether the Crown is acting consistently with the Treaty in relation to its action and policies to reduce disproportionate Māori reoffending rates. The Tribunal recognised and applied these principles and duties. We summarise these principles here and identify how we see these being relevant to this review.[46]

(a) Kāwanatanga and rangatiratanga: The Treaty is based on a fundamental exchange of kāwanatanga, or the right of the Crown to govern and make laws for the country, for the right of Māori to exercise tino rangatiratanga over their land, resources and people. Inherent in this exchange is the principle that the Crown's right to govern is

43 Cabinet Office *Cabinet Manual 2017* at 5.

44 Cabinet Office *Cabinet Manual 2017* at 1. See also the introduction to the Cabinet Manual (Cabinet Office Cabinet Manual 2017 at 5).

45 Legislation Design and Advisory Committee *Legislation Guidelines* (March 2018) at 27.

46 The Waitangi Tribunal is a standing commission of inquiry. It makes recommendations on claims brought by Māori relating to legislation, policies, actions or omissions of the Crown that are alleged to breach the promises made in the Treaty of Waitangi: Ministry of Justice "About the Waitangi Tribunal" (1 November 2018) Waitangi Tribunal <www.waitangitribunal.govt.nz/>. The Tribunal's role is set out in s 5 of the Treaty of Waitangi Act 1975. It is worth noting that the *United Nations Declaration on the Rights of Indigenous Peoples* GA Res 61/295 (2007) (which New Zealand officially endorsed in 2010), although not creating any binding legal obligations, is consistent with and complements the Treaty principles and duties as described in [2.47]. The Declaration's emphasis on self-determination in arts 3–4 provides international support for the recognition of rangatiratanga in New Zealand. In addition, art 31 of the Declaration imposes a duty on States to assist in the protection of indigenous resources including their "cultural heritage", "traditional knowledge" and "human and genetic resources". This aligns with the Treaty's approach to taonga. For further discussion on the relationship between the Treaty and Declaration see Kiri Rangi Toki "What a Difference a 'Drip' Makes: The Implications of Officially Endorsing the United Nations Declaration on the Rights of Indigenous Peoples" (2010) 16 Auckland U L Rev 243; and *Ngati Whātua Ōrākei Trust v Attorney-General* [2017] NZHC 389, [2017] 3 NZLR 516 at [111].

not unfettered.[47] The guarantee of rangatiratanga requires the Crown to acknowledge Māori control over their tikanga and to manage their own affairs in a way that aligns with their customs and values.[48] Kāwanatanga must be informed by rangatiratanga and vice versa.[49]

To find an appropriate balance between kāwanatanga and rangatiratanga in our review it is necessary to consider tikanga Māori in respect of DNA. We introduce the tikanga concepts that we see as being particularly relevant at [2.51].

(b) **Active protection**: This duty requires the active protection of taonga[50] and extends beyond the protection of specific Māori resources, to Māori interests more generally.[51] The Crown has a duty to protect such interests as far as is reasonable in the circumstances.[52]

For our review, it is notable that taonga can include intangible things, like values, traditions and customs.[53] Individual people are not generally considered to be taonga, but knowledge about whakapapa (genealogy),[54] human tissue[55] and human genes[56] have all been described as taonga by scholars or the Tribunal. Accordingly, to be consistent with the spirit of the Treaty, the Crown needs to actively protect the information derived from Māori DNA. This is particularly relevant in considering what the known person databank should be used for. For example, should academic research be permitted? We discuss these issues in Chapter 12.

47 Waitangi Tribunal *Tū Mai Te Rangi! The Report on the Crown and Disproportionate Reoffending Rates* (Wai 2540, 2017) at [4.1.1].

48 Waitangi Tribunal *Tū Mai Te Rangi! The Report on the Crown and Disproportionate Reoffending Rates* (Wai 2540, 2017) at [4.1.1]; Waitangi Tribunal *Te Whanau o Waipareira Report* (Wai 414, 1998) at 15–16; and Waitangi Tribunal *Turanga Tangata Turanga Whenua: The Report on the Turanganui A Kiwa Claims* (Wai 814, 2004) vol 2 at 113.

49 Waitangi Tribunal *Te Whanau o Waipareira Report* (Wai 414, 1998) at 29–30.

50 *New Zealand Māori Council v Attorney-General* [1994] 1 NZLR 513 (PC) [*Broadcasting Assets Case*] at 517. In this case, the Privy Council noted that te reo Māori is "a highly prized property or treasure (taonga)", as referred to in Article 2 of the Treaty.

51 Waitangi Tribunal *Tū Mai Te Rangi! The Report on the Crown and Disproportionate Reoffending Rates* (Wai 2540, 2017) at [4.1.2].

52 *Broadcasting Assets Case* at 517.

53 These are considered taonga tuku iho: Richard Benton, Alex Frame and Paul Meredith *Te Mātāpunenga: a compendium of references to the concepts and institutions of Māori customary law* (Victoria University Press, Wellington, 2013) at 396.

54 Professor Sir Ian Hugh Kawharu *Waitangi: Māori and Pākehā Perspectives of the Treaty of Waitangi* (Oxford University Press, Auckland, 1989) at 320–321. The description is in an English translation of the Māori text of the Treaty. In the footnote to treasures/taonga, Professor Kawharu, a respected scholar and former member of the Waitangi Tribunal, cites "whakapapa (genealogies)" in a short list of examples. See also Ministry for Culture and Heritage "Read the Treaty" (1 February 2017) New Zealand History <https://nzhistory.govt.nz/>; Waitangi Tribunal *Ko Aotearoa Tēnei: A Report into Claims Concerning New Zealand Law and Policy Affecting Māori Culture and Identity* (Wai 262, 2011) at 537–538; Hirini Moko Mead *Tikanga Māori: Living by Māori Values* (revised ed, Huia Publishers, Wellington, 2016) at 53; and Ministry of Justice "About the Māori Land Court" (8 August 2018) Māori Land Court: Te Kooti Whenua Māori <www.maorilandcourt.govt.nz/>.

55 Maui Hudson and others *He Tangata Kei Tua: Guidelines for Biobanking with Māori* (Te Mata Hautū Taketake – Māori and Indigenous Governance Centre, Hamilton, October 2016) at 8.

56 Waitangi Tribunal *Tū Mai Te Rangi! The Report on the Crown and Disproportionate Reoffending Rates* (Wai 2540, 2017) at 28. The Tribunal describes te ira tangata as "the essence of life" and as "the ultimate taonga". It can also be translated as human genes.

(c) **Equity**: The Crown has an obligation to act fairly towards Māori and non-Māori.[57] This principle complements the duty of active protection and can require positive intervention to address disparities.[58]

There are disparities in this context. As at 30 June 2018, Māori represented 15.75 per cent of the general population[59] but represented 41 per cent of those convicted of a criminal offence and 58 per cent of those sentenced to a prison term.[60] Accordingly, it can be inferred that the Māori population is over-represented on DNA profile databanks as well. There are a variety of reasons for this, including racial bias in policing.[61] A survey of police officers concluded that, while cultural awareness was improving, bias continued to be an issue for some officers.[62] As the Court of Appeal has noted, although that study is a number of years old, "the disparity in "criminal justice outcomes" that triggered concerns explored in it and other studies remains unchanged, and in some respects has become worse".[63]

(d) **Partnership and reciprocity**: This describes the ongoing relationship between the Treaty partners who are bound to work together reasonably, honourably and in good faith.[64] Good faith includes a duty to make informed decisions.[65] This may require consultation.[66]

In a 2017 article about the need for Māori involvement in the drug law debate, Khylee Quince talks about how Māori are "filtered into the [criminal justice] system" and what the Treaty relationship means in a bicultural nation. She states that, in terms of drug law reform, Māori "are the people most affected … you shouldn't be legislating about us without us".[67]

This also applies to the use of DNA in criminal investigations. As noted above, Māori are over-represented on the DNA profile databanks and are therefore the people most affected by law and practice in this area and need to be involved in the law reform discussion.

2.48 In addition, we note that the Waitangi Tribunal's kaupapa inquiry programme includes an upcoming inquiry into the justice system and specifically lists the criminal justice system

57 Waitangi Tribunal *Tū Mai Te Rangi! The Report on the Crown and Disproportionate Reoffending Rates* (Wai 2540, 2017) at [4.1.3].

58 Waitangi Tribunal *Tū Mai Te Rangi! The Report on the Crown and Disproportionate Reoffending Rates* (Wai 2540, 2017) at [4.1.3].

59 Calculated from population estimate data as at 30 June 2018 from <https://www.stats.govt.nz/topics/population-estimates-and-projections>: Māori population 766,000 and NZ population 4,864,600.

60 Calculated from the tables set out on the NZ statistics website: <https://www.stats.govt.nz/topics/crime-and-justice>; this aligns with findings made by Justine O'Reilly in 2014. She noted in a review for Police that, at that time, Māori made up 14 per cent of the population but 45 per cent of those arrested, 38 per cent of those convicted and 50 per cent of the prison population. *A review of Police and Iwi/Māori relationships: Working together to reduce offending and victimisation among Māori* (New Zealand Police, October 2014) at i.

61 See the discussion of unconscious racial bias in policing, particulary in respect of the exercise of stop and search discretions, in *Kearns v R* [2017] NZCA 51, [2017] 2 NZLR 835 at [24]-[26].

62 Gabrielle Maxwell and Catherine Smith *Police Perceptions of Maori: A Report to the New Zealand Police and the Ministry of Maori Development: Te Puni Kokiri* (Institute of Criminology, Victoria University of Wellington, March 1998) at 36, as discussed in *Kearns v R* [2017] NZCA 51, [2017] 2 NZLR 835 at [25].

63 *Kearns v R* [2017] NZCA 51, [2017] 2 NZLR 835 at [25].

64 *New Zealand Māori Council v Attorney-General* [1987] 1 NZLR 641 (CA) [*Lands Case*] at 664; Waitangi Tribunal *Orakei Claim Report* (Wai 9, 1987) at 207; and Waitangi Tribunal *Taranaki Report: Kaupapa Tuatahi* (Wai 143, 1996) at 17–18 and 132–134.

65 *Lands Case* at 682 per Richardson J.

66 *New Zealand Māori Council v Attorney-General* [1989] 2 NZLR 142 (CA) [*Forests Case*] at 152.

67 Max Towle "Why Māori need to be included in the drug law debate" *The Wireless* (online ed, New Zealand, 5 July 2017).

as an area for inquiry.[68] Kaupapa inquiries deal with issues of national significance affecting Māori as a whole and look at how the issue has affected the Treaty relationship as well as how the issue may potentially impact on government policy.[69]

Tikanga Māori

2.49 Tikanga has been described as "doing things right, doing things the right way, and doing things for the right reasons" in Māori culture.[70] It is also often described as Māori custom law.[71] Like the common law, tikanga has evolved over time and continues to adapt to accommodate developments in society and technology. Practices and ideas relating to tikanga also vary between hapū, iwi and rohe, but the central tenets are consistent throughout te ao Māori and reflect a shared set of values.

2.50 As explained at [2.47(a)], the Treaty reinforces the Crown's obligation to accommodate tikanga to the fullest extent possible in the exercise of kāwanatanga.[72] In relation to this obligation, the Commission offered the following advice in our 2001 study paper *Māori Custom and Values in New Zealand Law*:[73]

> If society is truly to give effect to the promise of the Treaty of Waitangi to provide a secure place for Māori values within New Zealand society, then the commitment must be total. It must involve a real endeavour to understand what tikanga Māori is, how it is practised and applied, and how integral it is to the social, economic, cultural and political development of Māori, still encapsulated within a dominant culture in New Zealand society.
>
> However, it is critical that Māori also develop proposals which not only identify the differences between tikanga and the existing legal system, but also seek to find some common ground so that Māori development is not isolated from the rest of society.

2.51 In line with that advice, we have begun a consultation process to identify the tikanga concepts that are engaged by the use of DNA in criminal investigations. After this initial consultation and research, our preliminary view is that personal tapu, whakapapa, whanaungatanga and manaakitanga are particularly relevant. These are complex and inter-related concepts, but a brief introduction is provided below:

(a) Personal tapu: Tapu has been variously described as "sacred, under ritual restriction and prohibited".[74] Every Māori individual inherits personal tapu, which is their most important spiritual attribute. This attribute can be traced back to the divine primeval parents Ranginui and Papa-tū-ā-nuku.[75] Personal tapu is closely linked to mana, a social quality reflecting how people and their achievements are recognised and

68 *Memorandum of the Chairperson concerning the kaupapa inquiry programme* (Waitangi Tribunal, 1 April 2015) at [25].

69 *Memorandum of the Chairperson concerning the kaupapa inquiry programme* (Waitangi Tribunal, 1 April 2015) at [12] and [22].

70 Bishop Manuhuia Bennet "Pū Wānanga Seminar" (presented with Te Mātāhauariki Institute) in Richard Benton, Alex Frame and Paul Meredith *Te Mātāpunenga: a compendium of references to the concepts and institutions of Māori customary law* (Victoria University Press, Wellington, 2013) at 431.

71 Hirini Moko Mead *Tikanga Māori: Living by Māori Values* (revised ed, Huia Publishers, Wellington, 2016) at 6–7.

72 Legislation Design and Advisory Committee *Legislation Guidelines* (March 2018) at [3.4] states that – independently of the Treaty – new legislation should, as far as practicable, be consistent with fundamental common law principles and tikanga. The Guidelines further note at [5.3] that "care should be taken where legislation may affect practices governed by tikanga". Notably, the Law Commission also has a statutory obligation to take te ao Māori (the Māori dimension) into account in all law reform projects: Law Commission Act 1985, s 5(2)(a).

73 Law Commission *Māori Custom and Values in New Zealand Law* (NZLC SP9, 2001) at [402]–[403].

74 Richard Benton, Alex Frame and Paul Meredith *Te Mātāpunenga: a compendium of references to the concepts and institutions of Māori customary law* (Victoria University Press, Wellington, 2013) at 404.

75 Hirini Moko Mead *Tikanga Māori: Living by Māori Values* (revised ed, Huia Publishers, Wellington, 2016) at 49–50.

respected in society.[76] Thus tapu can fluctuate, depending on the actions of an individual and what happens to them. It reflects the state of the whole person.[77] The notion of te tapu o te tangata (the sanctity of the person) is important.[78] This requires respect for an individual's personal space and for their body. Anything that comes from the body, like fingernails, hair and skin, is considered to have a mauri (often described as 'life spark' or 'essence') and needs to be disposed of carefully. The head and blood are considered particularly tapu.[79] It has been explained to us that, in certain circumstances, the State may be justified in intruding upon personal tapu, for example, where a person has driven whilst intoxicated[80] or is seeking to avoid their obligations as a parent.[81] In such cases, what is important from a tikanga perspective is that there is a good reason for the intrusion and that those affected understand what is happening and why. In the context of our review, this would include an explanation of what will happen to any biological sample and any DNA profile. This dialogue demonstrates respect for the person and can lessen the impact on personal tapu/mana. There is also scope to restore a measure of balance, by complying with tikanga during the process of destroying the sample. We discuss these issues further in Chapter 14.

(b) Whakapapa: Whakapapa literally means 'to place in layers'.[82] It describes the connections between people, and their responsibilities to past, present and future generations. It is the key to identity and belonging in te ao Māori.[83] Whakapapa reflects the social component of ira (genes). Ira tangata refers specifically to a human life that has inherited a collection of genes from its parents.[84] Ira tangata descend from ira atua, the Gods.[85] Thus ira represent a spiritual inheritance as well as a biological or physical inheritance. Put another way, an individual's body can be conceived of as a physical manifestation of their whakapapa.[86] The parallels between

76 Hirini Moko Mead *Tikanga Māori: Living by Māori Values* (revised ed, Huia Publishers, Wellington, 2016) at 56.

77 Hirini Moko Mead *Tikanga Māori: Living by Māori Values* (revised ed, Huia Publishers, Wellington, 2016) at 51.

78 Hirini Moko Mead *Tikanga Māori: Living by Māori Values* (revised ed, Huia Publishers, Wellington, 2016) at 43.

79 Hirini Moko Mead *Tikanga Māori: Living by Māori Values* (revised ed, Huia Publishers, Wellington, 2016) at 53–54; and Te Rangi Hīroa "Medicine Amongst the Maoris in Ancient and Modern Times" (Thesis for the Degree of Doctor of Medicine, University of Otago, 1910). See also the discussion of hauora in Elsdon Best *The Maori* (Board of Maori Ethnological Research, Wellington, 1924) vol 1 at 308. Hauora denotes vital, physical and intellectual wellbeing. Best notes that a person who has infringed tapu cannot be in a hauora state.

80 Hirini Moko Mead *Tikanga Māori: Living by Māori Values* (revised ed, Huia Publishers, Wellington, 2016) at 252 discussing *Police v Cooper* DC Papakura CRN 9055011094, 1 July 1999. See also *Raharaha v Police* HC Whangarei CRI-2008-488-23, 31 July 2008.

81 *B v T [Paternity]* (1997) 16 FRNZ 175 (DC).

82 Richard Benton, Alex Frame and Paul Meredith *Te Mātāpunenga: a compendium of references to the concepts and institutions of Māori customary law* (Victoria University Press, Wellington, 2013) at 504.

83 Hirini Moko Mead *Tikanga Māori: Living by Māori Values* (revised ed, Huia Publishers, Wellington, 2016) at 47; Makeriti Papakura *Makeriti: The Old Time Māori* (New Woman's Press, Auckland, 1986) at 37 in Richard Benton, Alex Frame and Paul Meredith *Te Mātāpunenga: a compendium of references to the concepts and institutions of Māori customary law* (Victoria University Press, Wellington, 2013) at 511.

84 Hirini Moko Mead *Tikanga Māori: Living by Māori Values* (revised ed, Huia Publishers, Wellington, 2016) at 46.

85 For a discussion of ira tangata and ira atua, see Hirini Moko Mead *Tikanga Māori: Living by Māori Values* (revised ed, Huia Publishers, Wellington, 2016) at 46.

86 Robert Webb and Rhonda Shaw "Whanau, whakapapa and identity in experiences of organ donation and transplantation" (2011) 8(1) SITES 40 at 44. See also Maui Hudson and others *Te Mata Ira: Guidelines for Genomic Research with Māori* (Te Mata Hautū Taketake – Māori and Indigenous Governance Centre, Hamilton, October 2016); and Maui Hudson and others *He Tangata Kei Tua: Guidelines for Biobanking with Māori* (Te Mata Hautū Taketake – Māori and Indigenous Governance Centre, Hamilton, October 2016).

ira, whakapapa and DNA are obvious. But while information derived from Māori DNA might be whakapapa information, whakapapa is much more. Whakapapa includes names, stories, social histories and connections to places. This information is considered tapu and has been described as a taonga.[87] Its protection has become a key concern for whānau, hapū and iwi.[88] As a result, Māori often place restrictions on access to their whakapapa information and limitations on how it can be used by others.

(c) **Whanaungatanga:** Whanaungatanga is linked to whakapapa and refers to the rights and responsibilities associated with being a relative.[89] Originally, it referred to blood relationships, but now it is used more widely to refer to, when appropriate, other kin-like relationships as well.[90] It denotes the fact that, in te ao Māori, relationships are everything and all individuals owe certain responsibilities to the collective.[91] There is clearly room for conflict between whanaungatanga and DNA databanking. Familial searching is particularly problematic, as we discuss in Chapter 13.

(d) **Manaakitanga**: Manaakitanga describes the process of showing and receiving care, respect, kindness and hospitality.[92] It is expected for all people, regardless of whether (or especially when) there is no pre-existing relationship. Thus, whanaungatanga may start with manaakitanga. This duty to nurture relationships, look after people and be very careful about how others are treated underpins all tikanga.[93]

2.52 In the development of the CIBS Act there was little express consideration of tikanga.[94] The Act was, however, designed to accommodate human rights concerns, and many of the underlying values are similar.[95]

87 See the discussion of taonga at [2.47(b)]. See also Hirini Moko Mead *Tikanga Māori: Living by Māori Values* (revised ed, Huia Publishers, Wellington, 2016) at 53.

88 Richard Benton, Alex Frame and Paul Meredith *Te Mātāpunenga: a compendium of references to the concepts and institutions of Māori customary law* (VUP, Wellington, 2013) at 514 and Dr Grant Philipson *Preparing Claimant Evidence for the Waitangi Tribunal* (Waitangi Tribunal, Wellington, 2004) at 15.

89 Hirini Moko Mead *Tikanga Māori: Living by Māori Values* (revised ed, Huia Publishers, Wellington, 2016) at 32.

90 Richard Benton, Alex Frame and Paul Meredith *Te Mātāpunenga: a compendium of references to the concepts and institutions of Māori customary law* (Victoria University Press, Wellington, 2013) at 524.

91 Law Commission *Māori Custom and Values in New Zealand Law* (NZLC SP9, 2001) at [130]. See Māmari Stephens "Fires Still Burning? Māori Jurisprudence and Human Rights Protection in Aotearoa New Zealand" in Kris Gledhill, Margaret Bedggood and Ian McIntosh (eds) *International Human Rights Law in Aotearoa New Zealand* (Thomson Reuters, Wellington, 2017) 99 at [3.3.02], which suggests that the broader base of whanaungatanga has enabled the development of a sense of *civic* obligations whereby Māori individuals and collectives began to accept that decisions could be made for and on behalf of their groups outside of immediate kin-based connections.

92 Richard Benton, Alex Frame and Paul Meredith *Te Mātāpunenga: a compendium of references to the concepts and institutions of Māori customary law* (Victoria University Press, Wellington, 2013) at 205.

93 Hirini Moko Mead *Tikanga Māori: Living by Māori Values* (revised ed, Huia Publishers, Wellington, 2016) at 33.

94 The following comments were made during the Parliamentary Debates on the Criminal Investigations (Bodily Samples) Amendment Bill 2009: (10 February 2009) 652 NZPD at 1125: Keith Locke (Green):

> I will be interested to hear the Māori Party's contribution on this bill, because I think the forcible extraction of blood from a person who is not even charged with an offence will be seen as offensive by many in the community. From what I understand about tikanga, to many Māori it is offensive and we should not support it"

and

> [Moana Jackson] mentioned the questions of tapu in Māori society in relation to taking bodily samples, and he was worried about cases when the person had been arrested. But in this bill, it is not just when people have been arrested; bodily samples can be forced out of people…

And at 1129: Te Ururoa Flavell (Māori Party) "The Māori Party believes in the sacredness of whakapapa, of genealogical connections, or bloodlines, and we believe there is no room for doubt when DNA is concerned" and (27 October 2009) 658 NZPD at 7499 Kelvin Davis (Labour):

2.53 A central tenet of both tikanga and human rights is the inherent dignity of all individuals, as part of a wider community.[96] In tikanga this flows through to personal tapu - a concept that aligns in many respects with bodily integrity (a concept we discuss further below) and other aspects of privacy law.[97]

2.54 A distinction between tikanga and human rights is that tikanga focuses on relationships and collective groups (as evident in our discussions of whakapapa, whanaungatanga and manaakitanga) while human rights focus more heavily on the individual.[98] In our view however this conflict tends to be exaggerated. As we stated in our 2006 study paper *Converging Currents: Custom and Human Rights in the Pacific*:[99]

> Individual rights are raised in human rights law substantially in the context of protecting the individual from an overbearing state, but there is no denying that individuals also have certain duties to the state and community, as reflected in article 29(1) of the UDHR [Universal Declaration of Human Rights].

2.55 Article 29 of the UDHR is equivalent to section 5 of NZBORA. Article 29 states:

> (1) Everyone has duties to the community in which alone the free and full development of his personality is possible.
>
> (2) In the exercise of his rights and freedoms, everyone shall be subject only to such limitations as are determined by law solely for the purpose of securing due recognition and respect for the rights and freedoms of others and of meeting the just requirements of morality, public order and the general welfare in a democratic society.
>
> (3) These rights and freedoms may in no case be exercised contrary to the purposes and principles of the United Nations.

> As a Māori, I know there is a whole cultural side to the sanctity of parts of a person's body, although I acknowledge that the persons from whom these bodily samples are taken, as a generalisation, have probably failed to respect the sanctity of another person's body. So I have little sympathy for those people; it is the person who has had a sample taken and is either not charged in the end or exonerated for whom I have empathy. I have described the way in which Māori, traditionally, have jealously guarded personal possessions—not just body parts like hair and fingernails but other personal items that come into contact with a person's body, such as clothes and hairbrushes, etc. This is because of the belief that if we physically take a part of a person, then we also capture a part of the person's wairua, and we can then use that to cause misfortune to the person. We call it mākutu.

At 7492: Carmel Sepuloni (Labour):

> The things that Kelvin Davis and I both talked about earlier with regard to the way in which many Pacific groups and Māori collect their hair—and even that is tapu, because they do not leave it lying around for someone else to pick up—can be deemed indicative of the fact that they understood, even prior to the science that we have now, that it contained information, and that the information was sacred.

And at 7495 Rahui Katene (Māori Party): [Following a discussion about the possibilities of unethical research and ethnic profiling] "We are, as I said earlier, absolutely committed to the protection of the sacred genetic make-up inherent in whakapapa, and, as such, we cannot support this bill." To alleviate concerns raised about Māori being targeted unfairly, the Government advised that: "the police will be required to report on the use of DNA sampling on an annual basis, to ensure that the use of this discretion is transparent." (10 February 2009) 652 NZPD at 1118: Simon Power (National). Otherwise no changes were made to the Bill to address concerns associated with tikanga Māori.

95 For an extensive discussion of the overlap between customary values in the Pacific and human rights values, see Law Commission *Converging Currents: Custom and Human Rights in the Pacific* (NZLC SP17, 2006) at chs 4–6.

96 The preamble to the *Universal Declaration of Human Rights* GA Res 217A (1948) begins: "Whereas recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world."

97 See Khylee Quince "Māori Concepts and Privacy" in Stephen Penk and Rosemary Tobin (eds) *Privacy Law in New Zealand* (2nd ed, Thompson Reuters, Wellington, 2010) 29 and 33; and Māmari Stephens "Fires Still Burning? Māori Jurisprudence and Human Rights Protection in Aotearoa New Zealand" in Kris Gledhill, Margaret Bedggood and Ian McIntosh (eds) *International Human Rights Law in Aotearoa New Zealand* (Thomson Reuters, Wellington, 2017) 99 at [3.6.03].

98 See Māmari Stephens "Fires Still Burning? Māori Jurisprudence and Human Rights Protection in Aotearoa New Zealand" in Kris Gledhill, Margaret Bedggood and Ian McIntosh (eds) *International Human Rights Law in Aotearoa New Zealand* (Thomson Reuters, Wellington, 2017) 99 at [3.2.01].

99 Law Commission *Converging Currents: Custom and Human Rights in the Pacific* (NZLC SP17, 2006) at [6.11].

2.56 The purpose of highlighting the similarities between tikanga and human rights is not to conflate the two. There are significant differences,[100] and our review must consider both in their own right. We aim to ensure that the use of DNA in criminal investigations is regulated in a way that accommodates tikanga wherever possible. The similarities that exist between human rights and tikanga simply serve to highlight that some options for reform may be capable of addressing both.

2.57 To illustrate the point, it is useful to consider how, for example, the notion of bodily integrity is dealt with in another area of law. Under the Search and Surveillance Act, bodily integrity does not prevent police officers from ever conducting a strip search, but it does require that strict guidelines are in place to ensure that such searches are conducted in the most respectful way possible.[101] There may be room to recognise tikanga in a similar way, as we discuss in Chapter 8.

NZBORA

2.58 The other major constitutional source that we consider to be particularly relevant is NZBORA.

2.59 Judges and commentators have long recognised NZBORA as a constitutional document.[102] NZBORA must be understood in context. Its purpose is to affirm New Zealand's international commitment to human rights and fundamental freedoms, particularly as a party to the International Covenant on Civil and Political Rights (the ICCPR).[103] These broader international human rights obligations are significant, especially when it comes to the right to privacy, as we discuss further at [2.81] to [2.88].

2.60 The right to privacy is not expressly provided for in NZBORA. It does, however, stem from the same core principle that underlies all the rights protected in NZBORA: the inherent dignity of the human person.[104]

2.61 Given that the DNA regime results in the State taking control of a biological sample that contains an individual's entire genetic blueprint – including information about health, ethnicity and family relationships – it is not difficult to see how a person's inherent dignity could be harmed by the State collecting, using and retaining their DNA.[105] Therefore, it is unsurprising that at least seven of the rights protected in NZBORA appear, at first glance,

100 Māmari Stephens "Fires Still Burning? Māori Jurisprudence and Human Rights Protection in Aotearoa New Zealand" in Kris Gledhill, Margaret Bedggood and Ian McIntosh (eds) *International Human Rights Law in Aotearoa New Zealand* (Thomson Reuters, Wellington, 2017) 99 at [3.6].

101 Search and Surveillance Act 2012, s 126. See also Law Commission *Search and Surveillance Powers* (NZLC R97, 2007) at [8.1]–[8.5] and [8.106].

102 See for example Rt Hon Sir Kenneth Keith *On the Constitution of New Zealand: An Introduction to the Foundations of the Current Form of Government* (2017); Andrew Butler and Petra Butler *The New Zealand Bill of Rights Act: A Commentary* (2nd ed, LexisNexis, Wellington, 2015) at 9–14; *Ministry of Health v Atkinson* [2012] NZCA 184, [2012] 3 NZLR 456 at [108]; Sian Elias "Fundamentals: a constitutional conversation" (2011) 19 Waikato L Rev 1 at 1–3; Paul Rishworth and others *The New Zealand Bill of Rights* (Oxford University Press, Melbourne, 2003); and *R v Poumako* [2000] 2 NZLR 695 (CA) at [75] per Thomas J.

103 New Zealand Bill of Rights Act 1990, long title.

104 As recognised in the preamble to the International Covenant on Civil and Political Rights 999 UNTS 171 (opened for signature 16 December 1966, entered into force 23 March 1976).

105 Section 3 of the New Zealand Bill of Rights Act 1990 states that the Act applies to acts done by the legislative, executive, or judicial branches of the New Zealand Government, or to acts done by any person or body in the performance of any public function, power or duty conferred or imposed by or pursuant to law. Therefore the New Zealand Bill of Rights Act 1990 applies both to Police, as an instrument of the Crown, and to ESR as a Crown Research Institute.

to be highly relevant to our review. However, as we explain in Table 1, we consider that only two rights are squarely engaged, these being section 19 (freedom from discrimination and section 21 (protection from unreasonable search and seizure).

Table 1: Relevant NZBORA rights

NZBORA PROVISION	THE PROTECTED RIGHT	IS THE RIGHT ENGAGED?
11	The right to refuse medical treatment.	*Not engaged.* To qualify as "treatment" under section 11, the action in question must be designed to improve the individual's health. The section does not apply where a medical procedure is undertaken for a forensic purpose.[106]
19	Freedom from discrimination.	*Engaged.* See [2.62] to [2.66].
21	Protection from unreasonable search or seizure.	*Engaged.* See [2.67] to [2.80].
23(4)	The right to refuse to make a statement.	*Not engaged.* There is debate on whether "statement" could be read broadly enough to include a biological sample.[107] However, the generally accepted view is that this right only protects written or oral statements involving either the creation of new information or the presentation of existing information in a new form. Similarly, the related privilege against self-incrimination in section 60 of the Evidence Act 2006 does not cover biological sampling.[108]
23(5)	The right to be treated with humanity and dignity.	*Engaged but overtaken by section 21.* The right in section 23(5) only applies when a person is arrested or detained and relates primarily to detention conditions.[109] Notably, biological samples are regularly collected following arrest, so the right is engaged in the sense that it covers the process of physically obtaining a biological sample in those circumstances. However, this physical process is squarely covered by section 21 (the protection against unreasonable search or seizure), which applies more broadly as it applies to the information derived from the sample as well and it is not limited to those arrested or detained.
25(c)	The presumption of innocence.	*Engaged but in some respects overtaken by section 21 and in other respects outside the terms of reference for our review.* The presumption of innocence in section 25(c) is triggered

106 Andrew Butler and Petra Butler *The New Zealand Bill of Rights Act: A Commentary* (2nd ed, LexisNexis, Wellington, 2015) at 428–429. See also *Jeffcoat v Waetford* (1999) 17 CRNZ 75 (HC) where s 11 was found not to apply in a case involving blood sampling and driving offending.

107 Andrew Butler and Petra Butler *The New Zealand Bill of Rights Act: A Commentary* (2nd ed, LexisNexis, Wellington, 2015) at 1169–1170.

108 By virtue of the definition of "information" in section 51(3) of the Evidence Act 2006, the privilege against self-incrimination can only attach to oral or written statements.

109 See *Taunoa v Attorney-General* [2007] NZSC 70, [2008] 1 NZLR 429 and the recent summary of section 23(5) jurisprudence in *S v Attorney-General* [2017] NZHC 2629 at [215]–[241].

NZBORA PROVISION	THE PROTECTED RIGHT	IS THE RIGHT ENGAGED?
		when a person is charged with an offence. It relates to the determination of that charge. It is questionable whether the practice of collecting biological samples upon arrest for the Temporary Databank intrudes upon the presumption of innocence.[110] The Temporary Databank is primarily designed to facilitate investigations into past or future offending, not to determine the charge the person was arrested for.[111] The Court of Appeal has found that an assessment of the risk of future reoffending is not the same as pre-determining a person's guilt in respect of a specific charge.[112] Therefore, in our view, section 25(c) is not engaged. Nevertheless, we consider that the existence of the right informs the debate as to whether retaining the DNA profiles of arrested persons is reasonable in a free and democratic society.[113] For further discussion, see Chapter 11. In relation to casework,[114] biological samples are almost always obtained from suspects prior to charges being laid, so section 25(c) is not triggered. However, it has been argued that the use of DNA evidence at trial could intrude upon the presumption of innocence.[115] The argument is that juries place too much weight on DNA evidence and that, as

110 Andrew Butler and Petra Butler *The New Zealand Bill of Rights Act: A Commentary* (2nd ed, LexisNexis, Wellington, 2015) at [23.4.14]–[23.4.17]; and *Rameka v New Zealand* (2003) 7 HRNZ 663 (UNHRC). In *Rameka v New Zealand* the United Nations Human Rights Committee (HRC) considered the legality of the preventive detention regime in New Zealand. Preventive detention is a sentence that can only be imposed on an offender if there is a "substantial risk" that he or she will reoffend at the end of any otherwise appropriate finite prison sentence. The majority of the HRC concluded at [7.4] that preventive detention cannot offend the presumption of innocence because no new charge is laid to attract its applicability. However, several members of the HRC dissented, and four of them stated at 681: "To rely on a prediction of [future] dangerousness is tantamount to replacing presumption of innocence by presumption of guilt".

111 It should be noted that, in theory, the databanks can be used in this way. See the discussion in Chapter 8 on suspect and elimination sampling.

112 See *McDonnell v Chief Executive of the Department of Corrections* [2009] NZCA 352, (2009) 8 HRNZ 770 at [38]–[40] where the Court of Appeal found that imposing an extended supervision order upon a person at the end of a prison sentence is not analogous to bringing fresh charges and so the presumption of innocence does not apply. Further, see *R v Dittmer* [2003] 1 NZLR 41, (2002) 19 CRNZ 710 at [25]–[31] where the Court of Appeal dismissed a submission that the imposition of a sentence of preventive detention was inconsistent with the presumption of innocence.

113 This question arises because of the protection in section 21 of the New Zealand Bill of Rights Act 1990 against "unreasonable" search or seizure. For a similar approach, see *S and Marper v The United Kingdom* [2008] 5 ECHR 167 (Grand Chamber). In *S and Marper* the European Court of Human Rights found that the United Kingdom's practice of collecting DNA samples pre-trial and retaining the resultant profiles, regardless of conviction or acquittal, breached Article 8 of the European Convention of Human Rights. The Grand Chamber drew on the presumption of innocence at [119] in its analysis of whether the interference with the right to privacy could be justified under Article 8(2) as being "necessary in a democratic society … for the prevention of disorder or crime …" For related discussions, see generally Liz Campbell "Criminal Labels, the European Convention on Human Rights and the Presumption of Innocence" (2013) 76 MLR 681; Brian Blakemore and Christopher Blake "Can the National DNA Database be Effective and Comply with Human Rights Legislation" (2012) 85 Pol J 191; Debra Wilson *Genetics, Crime and Justice* (Edward Elgar Publishing, Cheltenham (UK), 2015); Liz Campbell "A rights-based analysis of DNA retention: 'non-conviction' databases and the liberal state" (2010) 12 Crim LR 889; and United Kingdom Human Genetics Commission *Nothing to hide, nothing to fear? Balancing individual rights and the public interest in the governance and use of the National DNA Database* (November 2009).

114 See the Glossary at the beginning of this issues paper.

115 Nuffield Council on Bioethics *The forensic use of bioinformation; ethical issues* (September 2007) at [3.31]; David Turner "Towards a DNA Dystopia? Human Rights Concerns Under the Criminal Investigation (Bodily Samples) Act 2009" (2011) 2 NZLSJ 502 at 519; and Michael Kirby "Forensic Evidence: Instrument of Truth or Potential for Miscarriage?" (2009) 20 JLIS 1 at 14–20.

NZBORA PROVISION	THE PROTECTED RIGHT	IS THE RIGHT ENGAGED?
		a result,the practical reality is that the onus of proof shifts to the defendant to explain how their DNA came to be at the crime scene. We discuss this issue briefly in Chapter 5.
25(i)	The right of a child to be treated in a manner that takes account of their age	*Not engaged.* The right in section 25(i) applies to the determination of a particular charge. Therefore, like the presumption of innocence, it is not engaged by suspect sampling (which usually occurs prior to charging), and it is not engaged by sampling for the known person databank (because the databank is not usually used to resolve the charge that enables the sample to be taken). Despite this, our view is that the existence of the right supports the proposition that, to be reasonable in terms of section 21 of NZBORA, biological sampling procedures that apply to anyone under the age of 18 must take the age of those persons into account.[116] For further discussion, see Chapters 8 and 11.

Freedom from discrimination

2.62 Section 19(1) of NZBORA provides that everyone has the right to be free from discrimination on any of the grounds set out in section 21 of the Human Rights Act 1993 (HRA). Those grounds include race,[117] ethnic origin,[118] age (which is limited to any age over the age of 16)[119] and family status (which includes being related to a particular person[120] or class of persons[121]).

2.63 For an act or omission to amount to discrimination under section 19(1), it must:[122]

(a) create a distinction (in the sense of treating a group of people differently from a comparator group) based on a prohibited ground; and

(b) the distinction must cause a material disadvantage.[123]

2.64 If there is discrimination, it is necessary to consider section 5 of NZBORA by asking: Is the discrimination "prescribed by law" and "a demonstrably justified limitation on the right"?

116 This is similar to the approach we have taken in respect of the presumption of innocence in the table entry above. It also aligns with the Law Commission's recommendation that the Search and Surveillance Act 2012 should be amended to include a principle that search and surveillance powers should be exercised in a manner that minimises the impact on children and vulnerable members of the community: in Law Commission *Review of the Search and Surveillance Act 2012: Ko te Arotake i te Search and Surveillance Act 2012* (NZLC R141, 2017) at R5(c)(iv) (discussed at [4.85]–[4.88]).

117 Human Rights Act 1993, s 21(1)(f).

118 Human Rights Act 1993, s 21(1)(g).

119 Human Rights Act 1993, s 21(1)(i).

120 Human Rights Act 1993, s 21(1)(l)(iv).

121 Andrew Butler and Petra Butler *The New Zealand Bill of Rights Act: A Commentary* (2nd ed, LexisNexis, Wellington, 2015) at [17.8.35].

122 *Ministry of Health v Atkinson* [2012] NZCA 184, [2012] 3 NZLR 456 at [55].

123 Notably section 19(2) of the New Zealand Bill of Rights Act 1990 states: "Measures taken in good faith for the purpose of assisting or advancing persons or groups of persons disadvantaged because of discrimination that is unlawful by virtue of Part 2 of the Human Rights Act 1993 do not constitute discrimination."

2.65 In our review, the issue of possible discrimination arises in respect of the following:

(a) **Ethnic inferencing**: This is a form of forensic DNA phenotyping. Ethnic inferencing is when a crime scene sample is analysed by a scientist to determine the likely ethnicity of the person who left it behind. Our preliminary view is that this does not breach section 19, as we explain in Chapter 6. In brief, we do not think that this analysis technique causes a material disadvantage. Nonetheless, we consider that the technique does raise social and ethical issues and risks undermining tikanga.

(b) **Familial searching**: This is when a DNA profile on the CSD and profiles on a known person databank are compared to each other, but instead of looking for an exact match, the scientist looks for a near match. This may indicate that a close relative (a parent, child or sibling) of the person on the known person databank may be the source of a crime scene sample. We consider that familial searching does involve prima facie discrimination on the basis of family status, as we discuss in Chapter 13. We explore whether restricted use of this technique could be justified under section 5.

(c) **Collection of DNA profiles for the Temporary Databank from those aged under 20 years:** Under the CIBS Act, a police officer may decide to require a person to provide a biological sample if the officer intends to charge that person with an imprisonable offence or the offence of peeping and peering. The Police Manual provides guidance on how to make the decision and states that being under the age of 20 is a factor weighing in favour of requiring a sample.[124] In Chapter 11, we consider whether this policy of targeting 17– 20 year-olds for the databank is discriminatory on the basis of age.

2.66 In analysing these issues, we adopt the approach extrapolated from the case law surrounding sections 5 and 19 of NZBORA. Ideally, legislation governing the use of DNA in criminal investigations (and any options for reform) should not directly or indirectly make any distinctions based on a prohibited ground of discrimination if that distinction could result in a material disadvantage for a particular group. If, however, such a distinction is necessary (for instance to fulfil a different law reform goal), the rationale for the distinction needs to be supported by evidence and clearly stated. Further, the relevant law must transparently reflect that the distinction is permissible.

Protection against unreasonable search or seizure

2.67 The second right in NZBORA that we consider to be squarely engaged by our review is the protection against unreasonable search and seizure.

2.68 Section 21 of NZBORA states: "Everyone has the right to be secure against unreasonable search or seizure, whether of the person, property, or correspondence or otherwise." This raises two questions:

(a) What is a "search or seizure"?

(b) When will it be "unreasonable"?

2.69 There is no need to conduct further analysis under section 5 of NZBORA because an unreasonable search or seizure cannot be justified under the Act.[125] The matters of

[124] Police Manual *DNA Sampling* at 16-18.

[125] *Hamed v R* [2011] NZSC 101, [2012] 2 NZLR 305 at [162]; and *Cropp v Judicial Committee* [2008] NZSC 46, [2008] 3 NZLR 774 at [33].

justification that would ordinarily be considered in the context of section 5 are instead incorporated into the all-encompassing reasonableness inquiry required by section 21.[126]

What is a search or seizure?

2.70 A "search" for the purpose of section 21 is a State intrusion upon a reasonable expectation of privacy, and a "seizure" is a taking of what is discovered.[127] Applying these definitions to our review, it is clear that a police officer obtaining a biological sample directly from a person is conducting a search.[128] The sampling process, usually in the form of a buccal swab (mouth swab), involves a physical intrusion that interferes with the person's bodily integrity, even though it is almost always undertaken by the person themselves. This alone would qualify it as a search, as we discuss in Chapter 8.

2.71 However, the sampling process also results in the State taking possession of (and therefore seizing) a biological sample that contains the entire genetic blueprint of the individual. This includes information about the person's health, ethnicity and family relationships, which, if generated by scientists, would be part of the "biographical core of personal information" that section 21 is designed to protect.[129] Even if the biological sample may not be analysed in a way that reveals this information, the extent of the analysis relates to whether the seizure (which is a continuing act[130]) is reasonable, not whether it has occurred at all.

2.72 In addition to obtaining a biological sample directly from a known person, it is possible for a police officer to obtain such a sample indirectly. This can occur where the biological sample already exists independently of police actions. For instance, a person may provide a blood sample to a hospital for medical testing. If a police officer uplifted the sample from the hospital, that would clearly amount to a seizure.[131] However, other forms

126 Andrew Butler and Petra Butler *The New Zealand Bill of Rights Act: A Commentary* (2nd ed, LexisNexis, Wellington, 2015) at [18.15.4]–[18.15.5]. The authors describe this as the traditional approach and the one favoured by the Supreme Court. There is some debate as to whether a two-stage analysis would be more appropriate. In any event, there is considerable overlap between the reasonableness inquiries required by sections 5 and 21. In *Hansen v R* [2007] NZSC 7, [2007] 3 NZLR 1 Tipping J explained at [104] that, in applying section 5 of the New Zealand Bill of Rights Act 1990, it is necessary to ask:

> Does the limiting measure serve a purpose sufficiently important to justify curtailment of the right or freedom? Is the limiting measure rationally connected with its purpose? Does the limiting measure impair the right or freedom no more than is reasonably necessary for sufficient achievement of its purpose? And is the limit in due proportion to the importance of the objective?

These issues of purpose, proportionality and minimal intrusion also arise in the application of section 21 of New Zealand Bill of Rights Act 1990 as discussed at [2.67]–[2.80].

127 *Hamed v R* [2011] NZSC 101, [2012] 2 NZLR 305 at [160] and [163]. See also *Westco Lagan Ltd v Attorney-General* [2001] 1 NZLR 40 (HC) at [57] where McGechan J commented that seizure will usually suggest "physical removal, or assumption of physical control over, a tangible item, whether permanently or temporarily". As noted by Butler and Butler, there is considerable overlap between the concepts of "search" and "seizure": Andrew Butler and Petra Butler *The New Zealand Bill of Rights Act: A Commentary* (2nd ed, LexisNexis, Wellington, 2015) at [18.9.9].

128 Having endorsed the reasonable expectation of privacy test, Blanchard J at [165] in *Hamed v R* [2011] NZSC 101, [2012] 2 NZLR 305 gave "any physical examination of a person" and "the taking of bodily samples" as examples of actions that would qualify as searches.

129 In *R v Alsford* [2017] NZSC 42, [2017] 1 NZLR 710, the majority of the Supreme Court per Arnold J stated at [63] that:

> The reasonable expectation of privacy is directed at protecting 'a biographical core of personal information which individuals in a free and democratic society would wish to maintain and control from dissemination by the state' and includes information 'which tends to reveal intimate details of the lifestyle and personal choices of the individual.'

130 A seizure is not just the initial act of the State taking control of a thing. It extends to the situation after the thing is taken into custody and for so long as that state or situation continues: *Alwen Industries v Comptroller of Customs* (1993) 1 HRNZ 574 (HC) at 586.

131 In *T (CA438/2015) v R* [2016] NZCA 148 at [61]–[67], the Court of Appeal discussed whether a search warrant could be obtained under the Search and Surveillance Act 2012 in respect of biological samples obtained for medical purposes

of indirect sampling are more complicated. For example, is it a search or seizure if a police officer follows a person, watches them throw a drink bottle in a public rubbish bin and then collects the bottle to obtain their saliva? Is it different if the officer simply finds the drink bottle at a crime scene? The answers require us to consider the nature of individual and group interests in DNA. What ownership, property, privacy and/or other interests are at play?[132] We explore these issues in Chapters 5 and 9.

When will a search and/or seizure be unreasonable?

2.73 The Supreme Court has decided that:[133]

> If it is found that there is a search or seizure … the court must proceed to consider whether it was unreasonable, either because it occurred at all or because of the unreasonable manner in which it was carried out. In considering the question of unreasonableness, it is necessary to look at the nature of the place or object which was being searched, the degree of intrusiveness into the privacy of the person or persons affected and the reason why the search was occurring.

2.74 This test reflects what we described in our joint report with the Ministry of Justice *Review of the Search and Surveillance Act 2012* as the principles of proportionality and minimal intrusion.[134] The principle of proportionality is that State intrusion into an individual's privacy should be proportionate to the public interest in the investigation and prosecution of the offence or the maintenance of the law.

2.75 In terms of the degree of intrusion, the courts have recognised a hierarchy of interests protected by section 21 and that expectations of privacy are highest in relation to physical searches of, or seizures from, persons.[135] Further, the size and scope of any search also impacts on its intrusiveness.[136] Given that biological sampling involves an intrusion on bodily integrity followed by analysis of a person's DNA, it has the potential to be one of the most intrusive search and surveillance activities possible.

2.76 In terms of the justification, we explained in the *Review of the Search and Surveillance Act 2012*:[137]

and retained by a hospital or the Ministry of Health. The discussion is based on the presumption that a police officer obtaining such samples would be conducting a search or seizure. The focus of the discussion is on whether a search warrant would be available in these circumstances under the Search and Surveillance Act 2012. The Court considered, but did not determine, whether a pre-existing bodily sample could amount to a "thing" and/or "evidential material" as required by s 6 of the Search and Surveillance Act 2012. We discuss this issue further in Chapter 9. See also *R v Colarusso* [1994] 1 SCR 20, where the Supreme Court of Canada found that, by taking possession of a blood sample that had been taken from the appellant for medical purposes following a car accident, the police had breached the appellant's right to be secure against unreasonable seizure.

132 See *Re Lee* [2017] NZHC 3263, [2018] 2 NZLR 731 and *Yearworth v North Bristol NHS Trust* [2009] EWCA Civ 37, [2010] QB 1.

133 *Hamed v R* [2011] NZSC 101, [2012] 2 NZLR 305 at [172] per Blanchard J.

134 This principle is discussed in Law Commission *Review of the Search and Surveillance Act 2012: Ko te Arotake i te Search and Surveillance Act 2012* (NZLC R141, 2017) at [4.44]–[4.56]. Note also the proportionality test under s 30(2)(b) of the Evidence Act 2006 where, as relevant cases show, similar issues arise.

135 *R v Williams* [2007] NZCA 52, [2007] 3 NZLR 207 at [113]; *R v Shaheed* [2002] 2 NZLR 377 (CA) at [147] and [161]; and *Pettus v R* [2013] NZCA 157 at [50].

136 See *Powerbeat International Ltd v Attorney-General* (1999) 16 CRNZ 562 (HC) at [104] where Hammond J assumed (without deciding) that "the use of powerful techniques may require more justification". See also the Crown Law Office *Search and Surveillance Bill (45-1): Consistency with the New Zealand Bill of Rights Act 1990* (ATT395/108, 12 June 2009) at [8]: "the greater the degree of intrusiveness, the greater the degree of justification that is required and, further, the greater the attendant safeguards to ensure that justification is present."

137 Law Commission *Review of the Search and Surveillance Act 2012: Ko te Arotake i te Search and Surveillance Act 2012* (NZLC R141, 2017) at [4.55]–[4.56].

> As for the reason why the search is occurring, we expect that consideration would be given to the gravity and extent of the suspected offending. In general, there may be less justification for carrying out a search to target isolated "trivial or truly minor cases" than for more serious suspected offending. Similarly, activity carried out for general crime prevention or detection purposes is unlikely to be justified if it involves substantial intrusions on privacy.
>
> We also expect that the proportionality assessment would include consideration of whether the activity can be carried out in a less intrusive manner.

2.77 Significantly the proportionality assessment must be conducted on a case-by-case basis.[138] This means that the justification must be case specific. Ordinarily, this requires that, in any given case, a police officer must have reasonable grounds to believe that a particular offence has been or will be committed and that the proposed search or seizure will produce evidence of that offending.

2.78 The principle of minimal intrusion overlaps with the principle of proportionality. It requires searches and seizures to be exercised in a manner that minimises the intrusion on the privacy of any individuals likely to be affected.[139] This reflects the fact that an otherwise lawful search can still be in breach of section 21 if it is conducted unreasonably.[140] To avoid this, a search must be conducted in a way that is no more intrusive than is reasonably necessary to achieve its objective. This principle is pertinent to our discussions of DNA analysis techniques in Chapters 5, 6 and 13.

2.79 In *Review of the Search and Surveillance Act 2012,* we identified two further principles arising from the section 21 jurisprudence that are relevant to this review:[141]

(a) Statutory mechanisms (such as warrants, orders, statutory powers and policy statements[142]) should be used to carry out intrusive searches.[143] This principle is relevant to our discussion of elimination samples and indirect sampling in Chapters 8 and 9.

(b) A warrant or order should be obtained in preference to exercising a warrantless power.[144]

138 Law Commission *Review of the Search and Surveillance Act 2012: Ko te Arotake i te Search and Surveillance Act 2012* (NZLC R141, 2017) at [4.47]–[4.48]. The assessment must be case specific even if the search is undertaken for a broader "maintenance of the law" purpose such as preventing or detecting crime.

139 Law Commission *Review of the Search and Surveillance Act 2012: Ko te Arotake i te Search and Surveillance Act 2012* (NZLC R141, 2017) at [4.57]–[4.68].

140 For example, *R v Pratt* [1994] 3 NZLR 21 (CA) where a strip search conducted in public view was found to be lawful but unreasonable.

141 The report identifies three further guiding principles that underpin search and surveillance law but those principles do not arise directly from section 21 jurisprudence. We discuss two of those principles with reference to the right to privacy and the Treaty of Waitangi. The last principle relates to privilege and is not relevant to this review. See the discussion concerning the privilege against self-incrimination in Table 1 at [2.61].

142 Chapter 5 of Law Commission *Review of the Search and Surveillance Act 2012: Ko te Arotake i te Search and Surveillance Act 2012* (NZLC R141, 2017) explains the nature of policy statements. Such statements relate to grey areas where it may be unclear whether a particular type of activity is lawful or reasonable in the absence of a warrant. By way of example, section 206 of the Intelligence and Security Act 2017 requires the Minister responsible for an intelligence and security agency to issue publicly available ministerial policy statements that provide guidance to the agency on how certain activities should be carried out.

143 Law Commission *Review of the Search and Surveillance Act 2012: Ko te Arotake i te Search and Surveillance Act 2012* (NZLC R141, 2017) at [4.6]–[4.27].

144 Law Commission *Review of the Search and Surveillance Act 2012: Ko te Arotake i te Search and Surveillance Act 2012* (NZLC R141, 2017) at [4.28]–[4.43].

2.80 The warrant preference principle requires a "realistic and practical approach"[145] and reflects that a pre-requisite of most warrantless statutory search powers is a sense of urgency,[146] for instance, where there is a safety risk or a risk that evidence will be destroyed. In Chapter 11, we examine whether the warrantless search powers in the CIBS Act are consistent with this principle. This builds on the Attorney-General's NZBORA vetting report to Parliament from 2009, which concluded that such powers were not consistent with section 21 of NZBORA.[147] The vetting report stated that, absent emergency or other special circumstances, section 21 of NZBORA requires prior independent approval, usually from a judge, before a biological sample may be taken from a person.[148] As we discuss in Chapter 11, the need for independent pre-approval may be heightened by the fact that, unlike the fruits of most searches, DNA profiles are often retained by the State indefinitely.

The right to privacy

2.81 The concept of privacy is central to section 21 of NZBORA, but there is also a broader right to privacy not mentioned in that Act that is relevant to our review. This broader right is affirmed in article 17 of the ICCPR[149] and is reflected domestically in the Privacy Act 1993 and in the tort of privacy developed by the courts.[150]

2.82 The societal significance of this right is evidenced in New Zealand by the appointment of an independent Privacy Commissioner who is responsible for reviewing and commenting on any policy or legislative proposal that may affect the privacy of individuals.[151] To assist in this task, public sector agencies are encouraged to complete standardised Privacy Impact Assessments (PIA) in respect of their proposals.[152] There is also a Government Chief Privacy Officer who is responsible for leading an all-of-government approach to privacy.[153]

145 *F v R* [2014] NZCA 313 at [46].

146 See the discussion in Law Commission *Review of the Search and Surveillance Act 2012: Ko te Arotake i te Search and Surveillance Act 2012* (NZLC R141, 2017) at [4.37]–[4.43]; Andrew Butler and Petra Butler *The New Zealand Bill of Rights Act: A Commentary* (2nd ed, LexisNexis, Wellington, 2015) at [18.25.2]–[18.25.18].

147 Christopher Finlayson *Report of the Attorney-General under the New Zealand Bill of Rights Act 1990 on the Criminal Investigations (Bodily Samples) Amendment Bill (2009)* (10 February 2009).

148 Christopher Finlayson *Report of the Attorney-General under the New Zealand Bill of Rights Act 1990 on the Criminal Investigations (Bodily Samples) Amendment Bill (2009)* (10 February 2009) at [2.2.2].

149 Article 17(1) of the International Covenant on Civil and Political Rights 999 UNTS 171 (opened for signature 16 December 1966, entered into force 23 March 1976) states:

> (1) No one shall be subjected to arbitrary or unlawful interference with his privacy, family, home or correspondence, nor to unlawful attacks on his honour and reputation.
>
> (2) Everyone has the right to the protection of the law against such interference or attacks.

150 *Hosking v Runting* [2005] 1 NZLR 1 (CA).

151 Section 13(1)(f) of the Privacy Act 1993 states that this is a function of the Privacy Commissioner. Legislation Design and Advisory Committee *Legislation Guidelines* (March 2018) at [8.5] explain that the Government Chief Privacy Officer should also be consulted when developing new policies and legislation that may affect the privacy of individuals. The Guidance also includes a chapter on privacy and references it in discussing the "fundamental values and principles of a democratic society": at 8. See also the discussion of privacy in the Cabinet Office *Cabinet Manual 2017* at [8.66]–[8.77].

152 See Privacy Commissioner "Privacy Impact Assessment Toolkit" (7 July 2015) <https://privacy.org.nz/>. Private sector agencies are also encouraged to complete PIAs in respect of any project that involves the collection of personal information. These assessments identify privacy risks by applying the information privacy principles and explain how those risks will be minimised.

153 See <https://www.ict.govt.nz/governance-and-leadership/the-gcio-team/government-chief-privacy-officer/>.

2.83 Given the societal importance of privacy, we consider that to be constitutionally sound, the use of DNA in criminal investigations must take the broader right to privacy into account as well as section 21 of NZBORA.

2.84 The right to privacy is made up of overlapping interests. These can be difficult to conceptualise, but as noted by the Privacy Commissioner:[154]

> Despite the difficulties, a common understanding about privacy has emerged, in New Zealand and in many countries overseas. Our laws reflect this common understanding:
>
> - people need to be able to protect information about themselves.[155]
> - people need the opportunity to withdraw - physically or mentally - from society.[156]
>
> Privacy, as defined by this common understanding, is important to ensure that we feel secure. For instance:
>
> - We become tense when we are constantly under scrutiny.
> - We also often define our relationships with people by what information we choose to share with them. So if we are unable to control who knows information about us, we will feel insecure - at least in part because the boundaries of our relationships become uncertain.
> - Human beings need security to be able to function normally in their social environment.
>
> So privacy, which supports or creates feelings of security, is an important human right. If we feel secure, we're more likely to play a full part in society.
>
> However, although privacy is important, it is not absolute. Other important social interests can be more important in particular circumstances. All privacy laws make allowances for other social interests such as: preventing crime, ensuring safety and ensuring that courts get information to make their decisions.

2.85 In this paper, we refer to the need to be able to protect personal information as 'informational privacy'. The Privacy Act is New Zealand's main informational privacy law. It is designed to ensure that personal information is suitably protected by those that handle it. To do that, the Act contains 12 information privacy principles that apply to any agency (public or private) that holds personal information.[157] This includes law enforcement agencies, such as Police. Personal information is defined broadly as "information about an identifiable individual".[158] Significantly for our review, this definition would include any DNA profile associated with a known individual and probably includes the information generated from crime scene samples as well, as we discuss in Chapter 5.[159]

2.86 Some of the principles in the Privacy Act contain an express exception where there are reasonable grounds to believe that non-compliance "is necessary to avoid prejudice to the maintenance of the law by any public sector agency, including the prevention,

154 Privacy Commissioner "About Privacy" <https://privacy.org.nz/>.

155 In this paper, we refer to this as 'informational privacy'.

156 In this paper, we refer to this as 'physical and attentional'.

157 Privacy Act 1993, s 6.

158 Privacy Act 1993, s 2 definition of "personal information".

159 This is the approach that has been adopted in Australia. See Australian Law Reform Commission *Essentially Yours: The Protection of Human Genetic Information in Australia* (ALRC R96, 2003) at [43.45]; and Australia Attorney-General's Department *DNA Forensic Procedures: Further Independent Review of Part 1D of the Crimes Act 1914* (30 June 2010) at [7.1.1].

detection, investigation, prosecution, and punishment of offences".[160] This exception, however, does not render the principles irrelevant in the context of criminal investigations. They still apply and may only be infringed to the extent that is necessary in any given case to serve the societal interest in the maintenance of the law.[161] This aligns with the principles of proportionality and minimal intrusion discussed above.

2.87 Table 2 introduces the 12 information privacy principles and explains where they are of particular relevance to our review:

Table 2: Information privacy principles

PRINCIPLE	SUMMARY	RELEVANCE
1	Information should only be collected for a lawful purpose.	Analysis of crime scene samples (Chapter 5), Crime Sample Databank (Chapter 10) and collection for the known person databank (Chapter 11).
2	It should be collected directly from the person concerned where possible.	Indirect sampling (Chapter 9).
3	The person concerned should be told about what information is being collected and why.	Direct sampling (Chapter 8) and collection for the known person databank (Chapter 11).
4	Information should not be collected by unlawful, unfair or unreasonably intrusive means.	Direct sampling (Chapter 8), indirect sampling (Chapter 9) and collection for the known person databank (Chapter 11).
5	There must be safeguards in place to prevent misuse, loss or disclosure of the information.	Retention of DNA samples and profiles (Chapter 14) and oversight (Chapter 15).
6	The person concerned should be able to access their information.	Direct sampling (Chapter 8) and collection for the known person databank (Chapter 11).
7	The person concerned should be able to ask for their information to be corrected.	Direct sampling (Chapter 8) and collection for the known person databank (Chapter 11).
8	Reasonable steps must be taken to ensure information is accurate, complete, relevant, up to date and not misleading.	Analysis of crime scene samples (Chapter 5) and the Crime Sample Databank (Chapter 10).
9	Information should not be retained for longer than is necessary.	Retention of DNA samples and profiles (Chapter 14) and oversight (Chapter 15).
10	Information should only be used for the purpose for which it was collected.	Direct sampling (Chapter 8), use of the known person databank (Chapter 12) and familial searching (Chapter 13).

160 Privacy Act 1993, s 6 principles 2 (para 2(d)(i)), 3 (para (4)(c)(i)), 10 (para (1)(c)(i)) and 11 (para (11)(e)(i)).

161 For guidance on what "necessary" means in this context see Privacy Commissioner *Releasing personal information to Police and law enforcement agencies: Guidance on health and safety and maintenance of the law exceptions* (October 2017, updated December 2017); and *R v Alsford* [2017] NZSC 42, [2017] 1 NZLR 710.

PRINCIPLE	SUMMARY	RELEVANCE
11	Information should not be disclosed unless there is a good reason.	Use of the known person databank (Chapter 12) and familial searching (Chapter 13).
12	"Unique identifiers" should only be assigned were necessary.	Use of the known person databank (Chapter 12).

2.88 It is also important to consider the potential for a collective privacy interest in DNA information. As noted above, whakapapa information is considered tapu and has been described as a taonga. From a Māori perspective, DNA could be considered private information that relates to a group. Recognising a collective privacy interest in DNA may also accord with international developments in privacy law and is particularly relevant in the context of familial searching, where individuals' DNA is increasingly being used by Police to identify a close genetic relative as a suspect.[162] Collective privacy is discussed in Chapter 9.

Q2 One of our goals is to ensure that the use of DNA in criminal investigations is regulated in a way that is constitutionally sound. This requires ensuring that the regime is consistent with the principles of the Treaty of Waitangi and NZBORA and that any intrusions upon tikanga and privacy are minimised. What do you think about the way we have framed this goal?

ACCESSIBLE

2.89 In addition to being fit for purpose and constitutionally sound, the *Legislation Guidelines* specify that well-designed legislation should be accessible. This means that it should be easy to find, navigate and understand. This is particularly important for legislation that deals directly with the relationship between the State and individual citizens.

2.90 A universal theme amongst those we have consulted so far is that the CIBS Act is overly complex and confusing. Police officers, lawyers and those having their samples taken could legitimately interpret the applicable rights and obligations in different ways. The current inaccessibility of the Act is a central focus of Chapter 4.

Q3 One of our goals is to ensure that legislation governing the use of DNA in criminal investigations is accessible. It should be conceived of and expressed simply. What do you think about the way we have framed this goal?

162 Collective privacy is discussed in Chapter 9. Familial searching is discussed in Chapter 13.

CONCLUSION

2.91 In conclusion, our preliminary view is that the new legislation is needed. The CIBS Act is not fit for purpose, there are questions about how constitutionally sound the Act is in terms of the Treaty of Waitangi, tikanga, privacy and NZBORA, and it is overly complex. The remainder of the issues paper considers these issues in more detail. We use the identified objectives for this review to guide us to possible options for reform.

CHAPTER 3

The science

INTRODUCTION

3.1 In order to understand the Criminal Investigations (Bodily Samples) Act 1995 (CIBS Act), it is necessary to have a basic understanding of DNA science and DNA analysis. This chapter therefore starts with a brief description of the science and the current DNA analysis techniques used by the Institute of Environmental Science and Research (ESR) when it analyses biological samples (such as blood and semen) on behalf of New Zealand Police.

3.2 The chapter then provides a description of some additional DNA analysis techniques that are being considered for future use. These descriptions provide important context for the remainder of this issues paper.

DNA: THE BASICS

3.3 Human bodies are made up of cells. Within each cell are several compartments. This ordinarily includes a nucleus, which contains DNA. Nuclear DNA (DNA in the nucleus) is organised into 46 chromosomes. Everybody gets 23 chromosomes from each of their biological parents. Two are the sex-determining chromosomes, X and Y, and the rest are called autosomal chromosomes.

3.4 There are four bases (otherwise known as nucleotides) in DNA: adenine (A); thymine (T); cytosine (C); and guanine (G). These bases pair up in set ways to form "base pairs": A only pairs with T, and C only pairs with G. A nuclear DNA molecule contains 3 billion base pairs. These base pairs are spread across the 46 chromosomes. The arrangement of base pairs is 99.9 per cent the same across all human beings. However, the remaining 0.1 per cent is so variable that every individual has a unique DNA sequence.[1]

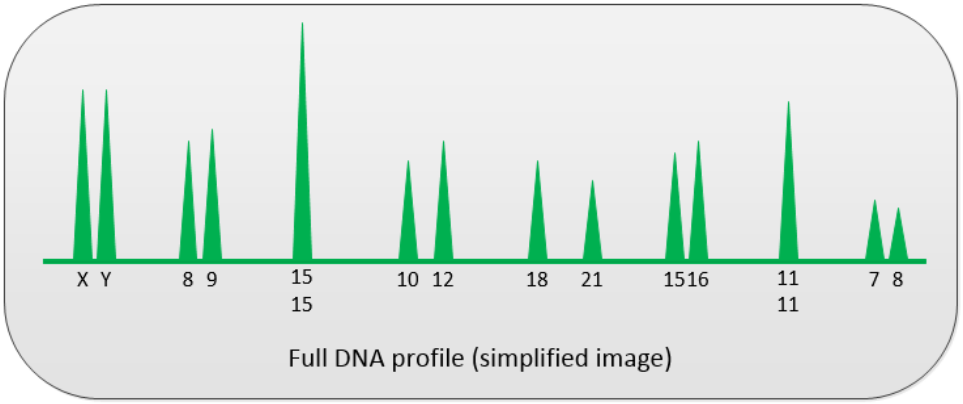
3.5 A scientist can identify the features of an individual's DNA in a number of different ways. The most obvious way is to sequence the person's whole genome (a technique known as whole genome sequencing or WGS).[2] Essentially, this involves identifying and recording the order of all 3 billion base pairs.

1 Recent studies have shown that even identical twins are likely to have minute differences in their DNA. On average, nine base pairs are likely to be different across the 3 billion pairs due to somatic mutations: Olivia M Gerth "Identical twins as a misnomer: how advancing technology protects the interests of justice in the courtroom" (2017) 30 Geo J Legal Ethics 783.

2 For more information on what whole genome sequencing is and the process involved, see National Human Genome Research Institute (US) "The Human Genome Project Completion – Frequently Asked Questions" (30 October 2010) <www.genome.gov/>.

3.6 An alternative is to focus solely on the areas of the genome that are known to vary among humans. This may involve focusing on the following:

(a) **Short tandem repeats** (STRs): These are repetitive chains of bases that occur at certain points on the genome. The length of these chains will differ from person to person. For example, at a particular spot on any given person's genome, the chain ATTAT may appear multiple times. STR profiling targets particular locations (loci) where these STRs are known to occur and measures them by counting how many times the chain is repeated at that location.[3] At each location, a set of STRs are measured. For the autosomal chromosomes, there are two STRs per location. These are known as alleles, and one allele is inherited from each parent. For the Y chromosome, there is only one copy of the chromosome, and so only one allele per location. These measurements are visualised as peaks on a graph. The DNA profile is the number of times each chain is repeated represented on a graph, plus the results of a sex test (usually XX or XY).



Full DNA profile (simplified image)

(b) **Single nucleotide polymorphisms** (SNPs): These are variations at the level of single base pairs. At certain points on the genome, one person may have a G and another may have a C. SNPs are the simplest and most common form of genetic variation accounting for about 90 per cent of the variations in humans.[4] On its own, an SNP would not be particularly helpful in identifying a particular person, but large numbers of 'SNP panels' or 'SNP arrays' can be helpful.

DNA ANALYSIS TECHNIQUES CURRENTLY USED

3.7 ESR, on behalf of Police, is responsible for analysing biological samples that contain DNA (such as blood, saliva and semen) in the context of criminal investigations. This is done on a contractual, fee for service basis.[5] This includes analysis of biological samples both from known people and from crime scenes.

3 The Forensics Library "DNA analysis" (22 August 2017) About Forensics UK <http://aboutforensics.co.uk/>: STRs are groups of 1–5 bases that repeat a varying number of times in different individuals. STR profiling uses groups of four or five bases because these groups do not degrade as much, which lowers the error rate. See also John M Butler and Dennis J Reeder "Short Tandem Repeat DNA Internet DataBase" (11 January 2018) STRBase – National Institute of Standards and Technology <https://strbase.nist.gov>.

4 The Forensics Library "DNA analysis" (22 August 2017) About Forensics UK <http://aboutforensics.co.uk/>.

5 ESR has provided forensic science services to Police since before the Criminal Investigations (Bodily Samples) Act 1995 came into force in 1996. Originally, this was done by way of a bulk-funding arrangement but is now a fee for service billing model set out in a Forensic Science Services Agreement between Police and ESR. The latest agreement is for the period 2018-2021. See Key terms and actors at the beginning of this issues paper for further discussion of this agreement.

3.8 There are several different analysis techniques ESR may choose to use. The choice of technique depends largely on the quality and quantity of the biological sample. If it is a good-quality sample containing plenty of DNA, it is usually analysed using traditional short tandem repeat (STR) profiling (as explained in the next section).

3.9 Traditional STR profiling is the main technique used by ESR when it analyses biological samples obtained by police from suspects and other known persons to create a DNA profile. These samples almost always take the form of a special card, known as an FTA card. A police officer will ask the person to rub a swab along the inside of their mouth to collect cellular material and then will press the swab against the card, transferring the collected material.[6] Both the card and the swab are then sent to ESR. This process generates high-quality samples. The DNA collected on the card is stable and can be stored for long periods of time.

3.10 By contrast, the DNA recovered from biological samples collected at crime scenes (crime scene samples) will be more variable in both quality and amount. A crime scene sample may be collected by rubbing a swab against an item – for example, a cup, some half-eaten food or a fingerprint. The crime scene sample that is collected may not contain much DNA or may contain DNA from multiple people. Consequently, ESR may need to use one or more supplementary techniques to obtain a DNA profile.

3.11 We now go on to explain what traditional STR analysis involves and the other supplementary techniques that are used now or may be possible to use in the future.

TRADITIONAL STR PROFILING – THE MAIN DNA ANALYSIS TECHNIQUE

3.12 Since the early 1990s, the main DNA analysis technique used in criminal investigations to obtain DNA profiles has been STR profiling – usually referred to as "traditional STR profiling". Generating a DNA profile from a sample (using DNA analysis) is a key part of the criminal investigation process, as once generated, profiles can be compared to each other to see if there is a match. For instance, a crime scene profile can be compared to a profile from a known person, such as a suspect, to see if there is a match.[7] Traditional STR profiling is also the only technique currently used around the world to generate DNA profiles for both crime scene databanks and known person databanks.[8] Initially, the analysis kits used for STR profiling for databank purposes focused on six loci on the autosomal chromosomes plus a sex test. These loci were chosen because, along with other criteria:[9]

6 We discuss the process of Police obtaining samples from known people in Chapters 8 and 11.

7 We discuss this process – called "forensic comparison" – in more detail in Chapter 7.

8 This is because, once a profile is generated, it can be uploaded to a databank. For instance, a crime scene profile can be uploaded to a databank of crime scene profiles, and a profile from a known person can be uploaded to the databank containing profiles of known people. These databanks can then be compared to each other to see if there are any matches. This process of comparing the Crime Sample Databank and known person databanks is discussed in more detail in Chapter 10.

9 Nuffield Council on Bioethics *The forensic use of bioinformation; ethical issues* (September 2007) at Appendix 4.

(a) they were on "non-coding" regions of the genome, which were believed to contain no information relevant to a person's health or physical characteristics; [10]

(b) they were on different chromosomes and so were likely to be independent of each other; and

(c) they were shown to vary greatly between people.

3.13 The independence of each locus is important. It enables forensic scientists to calculate the likelihood ratio, which they use to present their evidence in court. In lay terms, this is an assessment of how likely it is that the crime scene sample came from the person in question (usually the defendant). They do this by using anonymised population frequency datasets to calculate a likelihood ratio for each locus. They then multiply those ratios together to get an overall likelihood ratio.

3.14 The overall likelihood ratio compares two propositions: the likelihood of the DNA profiling results from the crime scene sample if they came from the suspect/person of interest compared to the likelihood of the same DNA profiling results from the crime scene sample if they came from a member of the New Zealand public selected at random. This ratio is then explained using an equivalent verbal scale.[11] For example: the likelihood of obtaining these [DNA profiling] results is at least one million times greater if the DNA in this sample originated from Person X rather than from someone selected at random from the general New Zealand public. On the verbal equivalent scale this would provide extremely strong support for the proposition that the DNA evidence came from the person of interest.

3.15 Over time, the number of loci targeted by the STR profiling analysis kits has increased. In New Zealand, ESR has previously used SGM (six loci[12]) and SGM Plus (10 loci[13]) kits and now uses Identifiler (15 loci[14]) and Globalfiler (21 loci[15]) kits. In Canada, Europe, the United States and Australia, the standard kits target 14–18, 16, 20 and 21 loci, respectively.

3.16 The chances of an "adventitious match" or a "false positive" between two full DNA profiles was around 1:50 million.[16] Academic research suggests that juries struggle to

[10] DNA contains instructions (coding) that are used to create proteins in the cell. Coding regions of DNA are known as genes. Non-coding regions of DNA do not code for proteins and used to be described as "junk" DNA. However, scientists now believe that this DNA simply serves a different purpose, such as telling genes when to switch on and off.

[11] The verbal equivalent scale used in New Zealand:

Likelihood ratio	Verbal equivalent
1	Is neutral
1-10	Provides slight support
10-100	Provides moderate support
100 - 1,000	Provides strong support
1,000 - 1,000,000	Provides very strong support
Over 1,000,000	Provides extremely strong support

[12] Plus the locus on the sex chromosome, so this kit tests seven loci in all.

[13] Plus the locus on the sex chromosome, so this kit tests 11 loci in all.

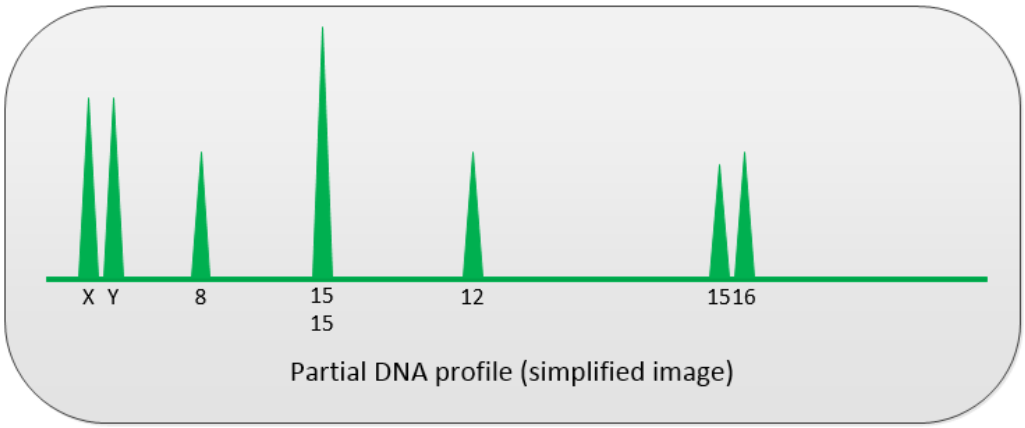
[14] Plus the locus on the sex chromosome, so this kit tests 16 loci in all.

[15] Plus the locus on the sex chromosome, another locus on the Y chromosome and a Y-STR locus - so this kit tests 24 loci in all.

[16] By "adventitious match" or "false positive" we mean that, purely by chance, the STRs in both profiles (the crime scene profile and the DNA profile of the known person) are the same at each locus tested – yet the crime scene profile did

make sense of this kind of statistical evidence and often conflate the likelihood ratio with a likelihood of guilt.[17] To address this, the United Kingdom has capped match probabilities at "more than 1 in a billion" to make the ratio more comprehensible.[18] So why increase the number of loci that are analysed?[19]

3.17 The answer lies mainly in the high variability of DNA in crime scene samples. As noted above, these samples often contain very small amounts of DNA, degraded DNA[20] and/or DNA from multiple people (known as a mixed crime scene sample). Scientists analysing a poor-quality crime scene sample may only be able to generate a partial DNA profile, if one can be generated at all.



3.18 In that situation, it is useful to test a larger number of loci. Even a partial match of only a few numbers may prove to be significant evidence.

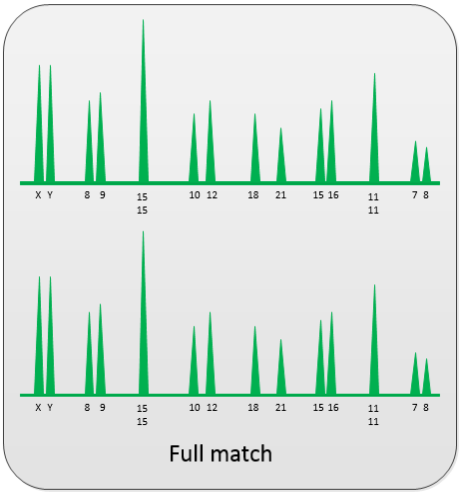
not come from the known person, but from a different person. This is possible within a large population group. As the number of loci tested has increased, the risk of adventitious matches has reduced. However, if a crime scene profile is degraded or partial, this increases the chance of an adventitious match.

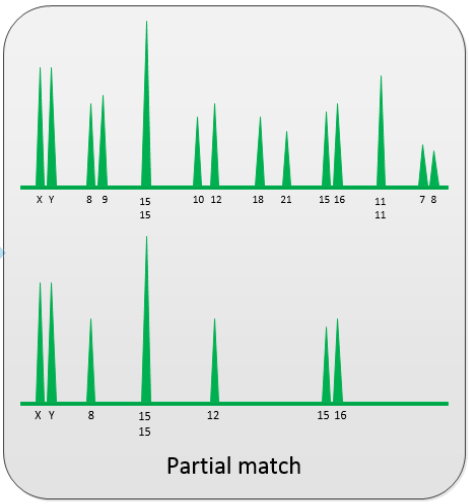
17 See for example John Rowan "Reviewing DNA Evidence" [2011] NZLJ 400; Rhonda Wheate "The Importance of DNA Evidence to Juries in Criminal Trials" (2010) 14 E&P 129; Yvette Tinsley "Science in the criminal courts: tools in service, challenge to legal authority or indispensable ally?" (2013) 25 NZULR 844; Valerie P Hans "Judges, Juries, and Scientific Evidence" (2008) 16 JL & Poly 19; Mike Redmayne "Presenting probabilities in court: the DNA experience" (1997) 1 E&P 187; Kate Cashman and Terese Henning "Lawyers and DNA: Issues in Understanding and Challenging the Evidence" (2012) 24 CICJ 69; J Holmgren "DNA Evidence and Jury Comprehension" (2005) 38 Canadian Society of Forensic Science Journal 123; Jessica Ritchie "Probabilistic DNA evidence: the layperson's interpretation" (2015) 47 AJFS 440; and Michael Kirby "Forensic Evidence: Instrument of Truth or Potential for Miscarriage?" (2009) 20 JLIS 1.

18 Sense About Science and EUROFORGEN *Making Sense of Forensic Genetics: What can DNA tell you about a crime?* (2017) at 13.

19 There was extensive debate in the United States recently about moving from 13 to 20 loci. The CODIS [Combined DNA Index System] Core Loci Working Group, established in 2010, identified three main factors in support of the change in 2011. It would facilitate greater discrimination, assist in missing person cases, and promote international sharing of data. Following widespread consultation, new loci were selected in 2014. Congress was notified, and the change took effect from 1 January 2017. For a summary of the process see: Federal Bureau of Investigation "Combined DNA Index System (CODIS) Overview" (27 April 2018) <www.fbi.gov/>. Similarly, the Nuffield Council on Bioethics *The forensic use of bioinformation; ethical issues* (September 2007) at [2.22] stated that the benefit of adding any more markers to the SGM+ set was "debatable", although we note that this statement was made over 10 years ago.

20 DNA that has become fragmented due to environmental pressures, such as temperature or moisture.





3.19 To illustrate this point, it is useful to consider a real case. In *Manoharan v R* (an aggravated burglary case in New Zealand), the crime scene sample was of such poor quality that it was only possible to obtain a partial DNA profile containing three alleles (that is, three numbers).[21] This was compared to a full DNA profile obtained from Mr Manoharan (Mr M), which consisted of 30 alleles (two at each of the 15 loci). For the three alleles that could be compared, the results were the same in Mr M's profile and the crime scene profile.

3.20 At trial, the scientist explained that the likelihood of obtaining this match was at least 20 times more likely if the DNA in the crime scene sample had originated from Mr M rather than from someone else unrelated to him and selected at random from the general New Zealand population. On appeal, the Court of Appeal commented that, put another way, 200,000 other New Zealanders would have shared the same profile.[22] Even though it was a low likelihood ratio, the DNA evidence formed an important part of a wider Crown case. Mr M was convicted at trial, and his conviction was upheld on appeal.

SUPPLEMENTARY DNA ANALYSIS TECHNIQUES

3.21 The high variability of DNA found in crime scene samples has led scientists to develop additional analysis techniques to supplement traditional STR profiling. This includes both DNA and non-DNA-based techniques. One of these techniques is LCN analysis, which was used alongside traditional STR profiling in *Manoharan v R*.

3.22 Tables 1 and 2 describe LCN analysis and various other supplementary techniques some of which are currently being used by ESR or are under consideration internationally.[23]

21 *Manoharan v R* [2015] NZCA 237 at [35]–[39]. To obtain this result, ESR had to use LCN analysis as well as traditional STR profiling. This technique is described in Table 1 at [3.23]. Note that an allele is one of many forms that a genetic marker at a particular locus may take. Within the context of STR (short tandem repeat) analysis, this is a difference in the number of repeats of the DNA sequence at that locus. The data (for any given person) typically shows two allele sizes (shown as numbers) at each locus: one allele contributed by the person's biological mother and the other allele contributed by the biological father.

22 *Manoharan v R* [2015] NZCA 237 at [53].

23 See generally Institute of Environmental Science and Research *DNA Techniques Available for Use in Forensic Case Work* (March 2016); Sense About Science and EUROFORGEN *Making Sense of Forensic Genetics: What can DNA tell you about a crime?* (2017); and Marcus Smith and Monique Mann *Recent Developments in DNA Evidence* (Australian Institute of Criminology, Trends and Issues in Crime and Criminal Justice no 506, November 2015).

Whether or not a technique will be used in New Zealand is a decision that Police and ESR make together. This decision process is discussed in Chapter 7.

3.23 For each technique, the tables include a description of the perceived benefits, cites one or two prominent New Zealand or international cases (where possible) and indicates how often the technique is used or when it could be available for use (if a decision were made to bring it into use in casework).

Table 1: Techniques currently in use

TECHNIQUE	DESCRIPTION	BENEFITS	STATUS AT ESR
LCN analysis	Low copy number (also known as low template DNA) analysis involves additional copying of small amounts of DNA, obtained from only a few cells.	Enables the analysis of very small amounts of DNA. This is often referred to as "trace DNA". See *Manoharan v R.*[24]	Used 10–5 times per year since 2006.
Y-STR profiling	This targets STR loci on the Y chromosome. Therefore, it can only be used to analyse male DNA. The resultant profile will usually be the same for close male relatives (father and sons) and will normally differ amongst the wider population. Therefore, Y-STR profiling provides less discrimination than autosomal techniques.	Is primarily used to detect very small amounts of male DNA in the presence of large amounts of female DNA. Can be good for resolving mixed crime scene samples where there are one or more male contributors. Has the potential to improve the accuracy of familial searches[25] and AIMs analysis (described below). See *Wallace v R*[26], *Carseldine v R*[27]and *R v Kerr.*[28]	Used routinely since 2006.
MiniSTR DNA profiling	This is similar to traditional STR profiling. As used at ESR, eight loci are tested using a kit (MiniFiler)	Enables the analysis of degraded crime scene samples.	Used 40 times in the last two years.

24 See also *Murdoch v R* [2007] NTCCA 1, (2007) 167 A Crim R 329.

25 See Chapter 2and Chapter 13.

26 *Wallace v R* [2010] NZCA 46, [2010] BCL: Wallace was found guilty at trial of murder. DNA taken from the victim's boots was linked to the appellant using Y-STR analysis (yielding a partial profile of five alleles with a likelihood ratio of 13 times more likely to have originated from the appellant's family). The case also involved LCN analysis of DNA found on a metal bar, arguably from Wallace's car. See also *R v Priestley* [2012] SASC 119: Priestley pleaded guilty to stabbing his former domestic partner but not guilty to an additional charge of rape. A mixed sample of DNA was recovered from the body of the victim. Y-STR DNA profiling was used to separate the accused's DNA profile from the victim's DNA profile. This evidence was admitted and included as circumstantial evidence used to find the accused guilty of rape.

27 *Carseldine v R* [2016] NZCA 573. Carseldine was convicted at trial of sexual violation by unlawful sexual connection. DNA found on the complainant's labia was 70 times more likely to have come from Carseldine or a paternal relative than from any other male selected at random from the New Zealand population.

28 *R v Kerr* [2016] NZHC 416. Kerr was found guilty at trial of blackmail. DNA was found on an envelope and letter, which retracted statements made in an earlier blackmail letter. The DNA was 260 times more likely to have come from Kerr (or one of his brothers or sons) than any other males sourced from the New Zealand population.

TECHNIQUE	DESCRIPTION	BENEFITS	STATUS AT ESR
	designed to work with degraded DNA. It is more sensitive than traditional STR profiling but less sensitive than LCN.		
Laser micro-dissection	This allows for the isolation of a particular cell type from a mixture of cells. These can then be analysed using traditional, LCN, MiniFiler or Y-STR profiling.	Good for resolving mixed crime scene samples containing small numbers of spermatozoa.	Used 1–8 times per year since 2010.
STRmix	Software developed by ESR and Forensic Science South Australia that uses mathematical algorithms to identify the most likely combination of DNA profiles in a mixed crime scene sample. Also used to interpret single contributor DNA profiles.	Enables the resolution of highly complex mixed crime scene samples, for instance, samples with multiple contributors. Usually up to three contributors and very rarely up to five.	Used routinely, for every autosomal statistical calculation since 2012.
Analysis of AIMs	This targets SNPs or STRs that are known to be ancestry informative markers (AIMs). This is used to identify the likely ethnicity of the person who deposited the crime scene sample. These markers can be on the autosomes, the Y chromosome and/or mitochondrial DNA.	Provides investigative leads. Chapter 6 discusses all 11 New Zealand cases. See also *R v Delroy Grant* (UK).[29]	Y- STRs have been used in this way by ESR in 11 cases since 2007.

Table 2: Techniques under consideration internationally

TECHNIQUE	DESCRIPTION	BENEFITS	FUTURE AVAILABILITY[30]
Analysis of EVCs	This targets SNPs that are known to be associated with externally visible characteristics (EVCs). This is used to identify likely physical characteristics of the person who deposited the crime scene sample, for example, hair, eye and skin colour.	Provides investigative leads. This could be particularly helpful in eliminating suspects. See Chapter 6.	Could be available for use in 1–2 years.

29 Crown Court Woolwich T20097551, 25 March 2011. Delroy Grant was convicted of multiple counts of burglary, rape and indecent assault, although it is estimated he committed hundreds of offences over 20 years. The media referred to him as the 'Night Stalker'. Grant was aware of forensic techniques and made use of a range of strategies to avoid leaving fingerprints, wore a mask and disconnected the electricity before he broke into a house. The victims were unable to describe the attacker, and there were contradictory accounts of his race. Without any investigative leads for almost two decades, police used DNA phenotyping to determine his race was Afro-Caribbean, which was used (unsuccessfully) in the investigation but was confirmed when Grant was later apprehended. See Kopec M "A new use of 'race': The evidence and ethics of forensic DNA ancestry profiling (2014) 31(3) J Appl Philos 237.

30 These techniques could be available for use within the noted timeframes, but only if a decision is made by Police and ESR to bring a technique into use in casework (see the Glossary at the beginning of this issues paper).

Analysis of MtDNA	Mitochondria (also found in cells) have their own DNA (MtDNA), which is different from nuclear DNA. MtDNA consists of around 16,000 base pairs and is inherited maternally so it will be the same for a mother and all her biological children. Analysis of MtDNA often involves sequencing all 16,000 base pairs.	Enables the analysis of degraded crime scene samples and cells that have no nucleus (for example, the cells in a hair that has no root attached). Has the potential to improve the accuracy of familial searches and AIMs analysis. See *R v Mikus* (New Zealand case but analysis in the United States).[31]	No immediate plans for implementation at ESR, but if analysis is required, it could be outsourced (internationally).[32]
NGS	Next generation sequencing (NGS) is a DNA sequencing technology that allows sensitive tests to be done simultaneously. For example particular STRs, SNPs, AIMs and EVCs could be identified using one test. The technology is already used routinely in non-forensic laboratories and in some forensic laboratories.	Provides more sensitive testing and can provide much more detailed results.	Underpinning technology could be in use in 1–2 years.
WGS	This codes the entire genome of the person who deposited the crime scene sample, that is, all 3 billion base pairs. WGS is routine in some non-forensic laboratories.	Provides incredibly detailed results. This could assist in distinguishing between suspects who are identical twins or multiples.	Could be in use in forensic laboratories in 5–10 years.
Rapid DNA devices	This refers to portable machines that undertake STR profiling (and potentially other forms of DNA analysis) on site within hours. These could be used at crime scenes or in the laboratory.	Provides more timely results. See: *State of South Carolina v Berry* (US).[33]	Could be in use in 2–5 years.
Epigenetics	Epigenetics looks at how DNA is regulated and expressed by identifying changes that affect DNA over time.[34]	Can be used for distinguishing between identical twins and for establishing biological age.	Could be in use in 2–5 years.

31 *R v Mikus* [2011] NZCA 298. Mikus was found guilty at trial of the murder of Teresa Cormack. 14 years after the investigation began, scientists found a potential match between the DNA in a small amount of semen found on the victim, and Mikus' DNA. To confirm the match scientists analysed the MtDNA in three hairs that had been found on the victim's body. These also matched Mikus. See also *Aytugrul v R* [2012] HCA 15, (2012) 247 CLR 170.

32 ESR advises that there are no immediate plans to introduce MtDNA testing as only a limited number of samples would require this type of analysis.

33 *State of South Carolina v Berry* as cited in Erin R Steward "Discussion and Evaluation: The Legality and Use of Rapid DNA Technologies" (2016) 84 UMKC L Rev 1133 at 1159–1161. A rapid DNA device was used to test blood on a murder suspect's shirt after he was stopped at a routine driver check point. It was found to be the blood of the victim. The evidence was ruled admissible at trial and the suspect pleaded guilty.

34 See generally Peter Gunn, Simon Walsh and Claude Roux "The nucleic acid revolution continues – will forensic biology become molecular biology?" (2014) 5 Front Genet 44.

RELATED TECHNIQUES

3.24 In addition to the techniques already described in this chapter, there are other forensic techniques that can be used to analyse biological samples. Analysis techniques are being used or developed in the fields of RNA (a nucleic acid, like DNA, but with different functions, including coding and carrying genetic information) and metagenomics (the study of genetic material from environmental samples).[35]

3.25 ESR has used messenger RNA (mRNA) analysis to identify body fluids since 2011. mRNA is the intermediary conveying information between nuclear DNA and proteins within cells. An mRNA profile is unique for each type of cell. ESR's current analysis kit (CellTyper 2) allows scientists to determine whether a crime scene sample consists of blood, menstrual blood, vaginal fluid, saliva or semen (with or without the presence of sperm).

3.26 Metagenomics can be used to identify the population of microbes that live on, in and around the human body. Microbes are a collection of microscopic lifeforms including bacteria, viruses and fungi. Every person sheds millions of microbes each day. This leaves behind what has been described as a "unique" and "persistent trail".[36] In the future, this could be analysed to provide police officers with intelligence leads. This might include indications as to whether the person who was at the crime scene was a smoker, drank heavily, owned a pet or lived in a particular area. It may also be able to uniquely identify a body fluid.

CONCLUSION

3.27 The scientific understanding of DNA and DNA analysis techniques has advanced considerably since the CIBS Act was enacted. ESR is constantly refining and developing the techniques that it uses to analyse biological samples for Police. Even traditional STR profiling has changed since it was introduced in the 1990s, as the analysis kits have increased in sophistication.

3.28 Crime scene samples, in particular, may be the subject of a wide array of different techniques. These techniques tend to be able to extract increasing amounts of DNA information from biological samples. In addition, the analysis process is largely unregulated by the CIBS Act. This raises related concerns about certainty and the accessibility of the law.

3.29 In Chapters 6 and 7, we discuss further the implications of some of these changes and propose some options to regulate these techniques. Next, however, we examine the original framework for the CIBS Act and identify that scientific advances are just one of a number of reasons why, in our view, new legislation is required.

35 National DNA Database Ethics Group (UK) *Ethical Dimensions of Next Generation Sequencing – Stakeholder Consultation* (March 2017).

36 See George M Dery "Should Everyone Now Use the 'Royal We'? The Microbiome's Implications for Fourth Amendment Rights" (2017) 26 PILJ 1. The authors note that "researchers have successfully matched smartphones and keyboards to the people who used them by analysing microbial signatures".

CHAPTER 4

Time for a new Act

INTRODUCTION

4.1 In this chapter, we outline the history and structure of the Criminal Investigations (Bodily Samples) Act 1995 (CIBS Act). We then compare the CIBS Act to equivalent legislation in jurisdictions that New Zealand often compares itself to. This provides the necessary context within which to consider the question: Is it time for a new Act?

4.2 In answering this question, we identify seven fundamental problems with the Act. Most are explored in more detail elsewhere in this issues paper. However, we consider it important to draw attention to their collective breadth and depth at the outset. Our preliminary view is that these problems would only be exacerbated if the CIBS Act were heavily amended for a third time. Our advisory groups and others with whom we have consulted so far agree.

4.3 This chapter sets out the case for needing a new Act. In the chapters that follow, we explore the options for what that new Act should say.

THE HISTORY OF THE CIBS ACT

Policy development

4.4 In 1992, the (then) Department of Justice put together a proposal for legislation to facilitate New Zealand Police use of DNA in criminal investigations in New Zealand. The proposal focused on using DNA in casework.[1] The proposed legislation would establish a framework for police officers to obtain blood samples from suspects. The DNA profile generated from such a biological sample could then be compared to a DNA profile generated from a biological sample found at the scene of the offence under investigation. Put another way, the suspect's DNA profile could be compared directly with a DNA profile generated from a crime sample.

4.5 In its submission on draft legislation in 1993, Police suggested that, for DNA to be properly utilised, a databank of DNA profiles of convicted offenders needed to be established as well. The function of such a databank was compared to the fingerprint database already maintained by Police.[2]

1 Casework is the term used within a specific criminal investigation to describe the process of comparing a crime scene profile to the DNA profile of a known person or alternatively the analysis of a crime scene sample in isolation (that is, performing analysis on that sample alone, without comparing it to the DNA profile from a known person). The current use of DNA in casework is discussed in Part B of this issues paper (Chapters 5 to 9).

2 Letter from JA Jamieson (Commissioner of Police) to the Secretary for Justice (Department for Justice) regarding Police Submissions on DNA Sample Legislation (17 February 1993).

4.6 In July 1994, following further work on the databank proposal, the (then) Minister of Justice recommended to Cabinet that it agree to legislation that would establish both a regime for using DNA in casework and a DNA profile databank. The Minister explained that the purpose of the databank would be two-fold:[3]

> First, where a convicted offender reoffends the police may be able to match that offender's DNA profile with a body sample left at the crime scene. It will also help eliminate from consideration those suspects whose profiles are in the databank and which do not match the sample from the crime scene. Police resources in the investigative process will be saved, swift apprehension of the offender will be possible, and there will be minimal interference with the lives of suspects eliminated from the enquiries. Secondly, convicted offenders may be deterred from future offending if there is a high chance of apprehension because their DNA profile is in the databank.

4.7 Cabinet accepted the proposal. This resulted in the original Act, the Criminal Investigations (Blood Samples) Act 1995, which came into force in August 1996.

The original Act

4.8 In 1995, it was still relatively novel for Police to use DNA in criminal investigations in New Zealand. The process of analysing biological samples was expensive, and blood sampling was the only reliable way of obtaining a DNA profile in relation to a known person (such as a suspect). Taking a blood sample directly from a person, particularly if reasonable force was required, was considered a grave intrusion on bodily integrity.[4] Accordingly, the original Act contained extensive restrictions and safeguards, particularly around the collection process.

4.9 The original Act was divided into five Parts:

- Part 1 – Preliminary provisions.
- Part 2 – Obtaining blood samples from suspects. This Part provided for a blood sample to be obtained from a suspect that could then be analysed and the resulting profile compared to a profile from a crime scene sample. A suspect needed to consent to giving a blood sample, or Police had to apply to the High Court for a compulsion order. A blood sample could only be obtained if the offence under investigation was one of the 32 serious sexual or violent crimes listed as a "relevant offence" in Part A of the Act's Schedule. Extra protections applied to suspects under the age of 17. The Part contained detailed provisions governing the consent process as well.
- Part 3 – DNA Profile Databank (DPD). This Part provided three methods for adding DNA profiles to the DPD. First, if a person was convicted of a "relevant offence" or related offence in respect of which a sample was obtained under Part 2, the profile

[3] Douglas Graham *Memorandum for Cabinet Social and Family Policy Committee: Enforcement, prosecution and Sentencing: Part G Obtaining Blood Samples from Certain Convicted Offenders for the Purpose of a DNA Databank* (July 1994) at 2.

[4] There was also concern that the taking of blood samples from suspects breached the fundamental premise that an individual was innocent until proven guilty. Phil Goff, the Opposition MP for Roskill and Labour's justice spokesperson, highlighted the line being crossed: see (29 November 1994) 545 NZPD 5194:

> the common law has long protected the sanctity of the individual from physical interference, in particular when an individual has been neither arrested nor charged. Any diminution of this right requires the closest possible scrutiny both in terms of the justification for diminishing the right and in terms of the procedures that need to be followed.

would be transferred to the DPD. Second, a police officer could ask anyone aged 17 years or over to provide a sample by consent for the purpose of adding their profile to the DPD (a databank consent sample). Third if someone was convicted of a "relevant offence" (but no sample had been obtained under Part 2), the officer could apply to the High Court for a databank compulsion order to obtain a sample from the convicted person. If the application was successful and the sample obtained, the resulting profile would be added to the DPD. Extra protections applied to those under 17 years of age. Under Part 3, "relevant offence" included the serious sexual and violent offences listed in Part A of the Act's Schedule and two further offences listed in Part B: burglary and entering with intent. These were considered precursors to the more serious offences in Part A. It was thought that, by putting those convicted of Part B offences on the DPD, those people could be caught if they progressed to the more serious offending. Once populated, the DPD could be regularly compared to a databank of crime scene profiles. However, Part 3 did not expressly mention this comparison process nor establish a databank of crime scene profiles.

- Part 4 – Procedures for taking blood samples. This Part explained who could take a blood sample (only a medical practitioner or registered nurse), how it could be done (by fingerprick or venous syringe – but if reasonable force was required, only by fingerprick) and provided various other safeguards (for example, the ability to have a support person and requirements to afford reasonable privacy and to provide certain information).
- Part 5 – Miscellaneous provisions. This Part addressed procedural, evidential and other matters.

4.10 Significantly, when the original CIBS Act was enacted, the only other country that had a DNA profile databank for use in criminal investigations was the United Kingdom – and its databank was only a few months old. Therefore, there was no real opportunity to benefit from the experience of other countries in developing DNA databank legislation.

4.11 It is also important to note that although the CIBS Act does not establish (and nor does it mention) a databank of crime scene profiles, such a databank does exist, and has existed from the time the CIBS Act was enacted. The Institute of Environmental Science and Research (ESR), which conducts the analysis of biological samples and administers the DPD on behalf of Police, also maintains what it calls the Crime Sample Databank (CSD). We refer to it by this name throughout this issues paper. The CSD is a databank of DNA profiles that have been generated from crime scene samples. The CSD plays a key role in the forensic comparison process. For instance, if a biological sample is collected from a crime scene, Police may ask ESR to analyse it and to obtain a DNA profile. ESR may then upload the profile onto the CSD. The CSD can be compared to the known person databank

4.12 The CSD is not regulated by the CIBS Act. Instead, it is governed by policies agreed between ESR and Police.

4.13 We mention the CSD at this point because it is key to understanding how the CIBS Act works in practice and, in particular, understanding subsequent amendments to the Act.

The 2003 amendment

4.14 In 2003, a number of significant amendments were made to the Act. It was at this time that the name of the Act changed from the Criminal Investigations (*Blood* Samples) Act 1995 to the Criminal Investigations (*Bodily* Samples) Act 1995 to reflect the introduction of a new method for obtaining a biological sample from a known person: buccal (mouth) swabbing. In addition, there were three other changes of particular significance: the introduction of databank compulsion notices; changes to the definition of relevant offence; and new provisions in relation to sampling from children.

Buccal swabbing (mouth swabbing)

4.15 Buccal swabbing involves rubbing a swab on the inside of the person's mouth. Parliament decided that this procedure did not need to be performed by a medical practitioner or registered nurse, so the amendment included an option to allow people to perform the procedure themselves under police supervision.

4.16 Following the amendment (which affected Parts 2, 3 and 4), a biological sample could be obtained from a known person in three ways: mouth swab, fingerprick or venous sample. Each method triggered a slightly different set of procedural rules. These rules also differed depending on whether the person was an adult or under the age of 17. This change made it more difficult for police officers to determine which procedural rules applied in any given case.

Databank compulsion notices

4.17 By 2003 it was clear that databank compulsion orders issued under Part 3 of the Act were almost always granted by the High Court, because if a convicted offender qualified for a compulsion order, very few grounds were available to oppose it. Therefore, to make the best use of judicial time, the 2003 amendment allowed commissioned police officers to issue databank compulsion notices instead of applying to the High Court for a databank compulsion order. These notices required a convicted offender to provide a biological sample for the DPD at a set time and place. They could be challenged in the High Court but only on limited grounds.

4.18 As a result of this change, some of the symmetry between Parts 2 and 3 of the CIBS Act was lost. Both Parts still contained procedures for obtaining samples by consent. However, the compulsion procedures for obtaining samples under each Part now differed significantly.

Definition of relevant offence

4.19 Another significant change in 2003 related to the definition of "relevant offence". As introduced, the amendment Bill sought to enable a police officer to seek a suspect compulsion order in relation to any "relevant offence" (that is, any offence listed in Part A or B of the Schedule). As explained above, under the original CIBS Act, the offences in Part B of the Schedule only qualified as "relevant offences" under Part 3 of the Act (for the databank) not under Part 2 (for casework). This meant that, if a suspect in a burglary or entering with intent case refused to provide a suspect sample by consent, a police officer could not obtain a compulsion order under Part 2. The amendment sought to change this.

4.20 What would have been a relatively simple amendment became more complex during the select committee process, and Parliament decided to further expand the definition of "relevant offence".

4.21 First, the Bill repealed the original Schedule and replaced it with a new one. Part 1 of the new Schedule listed all of the offences that had been listed previously in the original Schedule (both Parts A and B). Part 2 then listed an additional 27 sexual and violent offences and three preparatory offences to burglary. The additional sexual and violent offences were added largely to align with the list of qualifying offences in the Sentencing Act 2002 for the sentence of preventive detention. The other three offences were added as part of the Government's policy to focus on addressing burglaries. The reason for splitting the Schedule into two Parts was to reflect a further aspect of the 2003 amendment that enabled retrospective sampling of offenders convicted of an offence listed in Part 1 of the new Schedule, but not those in Part 2.

4.22 The Bill amended the definition of "relevant offence" in section 2 to reflect these changes but complicated matters further by broadening the definition to include any offence punishable by seven years' imprisonment and any attempt or conspiracy to commit an otherwise qualifying relevant offence. This resulted in considerable overlap between the various limbs of the definition, as 58 of the 62 offences in the new Schedule were also punishable by seven years' imprisonment or more.[5]

4.23 After the 2003 amendment, the definition of "relevant offence" was overly complex, and the rationale behind the choice of offences in the Schedule was no longer intuitive.[6]

Part 2A and non-prosecutable children

4.24 The final significant change was that the 2003 amendment inserted Part 2A into the CIBS Act. It dealt with criminal offending by children who could not be prosecuted because of their age at the time of the alleged offending.[7] Part 2A allows a police officer to obtain a biological sample from a child suspected of a non-prosecutable offence, with the child's consent and the consent of a parent. Police officers need to investigate these offences, even though prosecution is not a possibility. That is because the commission of a criminal offence is one of the factors that is relevant to any court determination as to whether a child is in need of care or protection under the Oranga Tamariki Act 1989.[8]

4.25 Part 2A is relatively straight-forward in itself and has been used fewer than 25 times since 2003. However, its inclusion added yet another layer of complex procedural rules for taking and retaining biological samples and DNA profiles.

5 The four remaining offences were: being in possession of an instrument for conversion (then section 229 of the Crimes Act 1961, punishable by one year's imprisonment); entering with intent (then section 242 of the Crimes Act 1961, punishable by five years' imprisonment); being armed with intent to break or enter (then section 243 of the Crimes Act 1961, punishable by five years' imprisonment); and being disguised or in possession of instruments for burglary (then section 244 of the Crimes Act 1961, punishable by three years' imprisonment). All four offences were repealed later in 2003. Being in possession of an instrument for conversion (now section 227) and being disguised or in possession of instruments for burglary (now section 233) were re-enacted in a similar form with the same maximum penalties.

6 A mistake as to whether a particular charge of theft qualified as a "relevant offence" led to Police issuing an unlawful databank compulsion notice in *Liston-Lloyd v Commissioner of Police* [2014] NZHC 2615. The Commissioner of Police was subsequently ordered to pay $2,500 in compensation: *Liston-Lloyd v Commissioner of Police* [2015] NZHC 2614. Similarly in *Police v Fraser* HC Wellington CRI-2007-485-69, 3 October 2007, a suspect compulsion order application was declined because the offence of theft did not qualify at the time of the relevant offending.

7 A child is defined as over the age of 10 years but under the age of 14: Criminal Investigations (Bodily Samples) Act 1995, s 2.

8 Oranga Tamariki Act 1989, s 14(1)(e).

The 2009 amendment

4.26 Further major amendment to the CIBS Act occurred in 2009. The main policy intent behind this amendment was to require DNA profiling for every person a police officer arrested or intended to charge with an imprisonable offence in order to:[9]

> … recognise DNA as the modern day fingerprint and to assist police solve more crime by having more identified DNA profiles to match against the increasing number of DNA samples obtained from scenes of unsolved crimes.

4.27 To achieve this aim, the 2009 amendment inserted Part 2B, which established a second known person databank: the Temporary Databank. As well as introducing Part 2B, the 2009 amendment further expanded the range of offences that qualify under Parts 2, 2B and 3 of the Act.

Part 2B and the Temporary Databank

4.28 Under Part 2B, a police officer could require any person they intended to charge with a specified offence to provide a biological sample. Unlike Parts 2 and 3, this power was not framed with reference to consent nor was any avenue provided to challenge the officer's decision in court. After a charge was laid, the DNA profile generated from the reference sample was to be stored on the Temporary Databank, until such a time as the charge was resolved.[10] If the person was convicted, the DNA profile would be transferred to the DPD. If not, the DNA profile was destroyed. Like the DPD, the Temporary Databank was designed to be routinely compared to the CSD, but that was not expressly stated in the Act. The result was that an individual's DNA profile could be compared to the CSD prior to that person being convicted of an offence.

4.29 When Part 2B came into force, the clear distinction between Parts 2 and 3 of the CIBS Act was lost. There was now considerable overlap.

4.30 As we explain in Chapter 8, both Parts 2 and 2B can be used in casework. This creates uncertainty for any police officer who has identified a suspect where DNA may be relevant to the investigation. If there is sufficient evidence to charge the suspect, should the officer ask the person to provide a suspect sample by consent under Part 2 or arrest the person and require a databank sample for the Temporary Databank under Part 2B? Either way, the suspect's DNA profile can be compared to the crime scene profile. Part 2 allows for a direct one-to-one comparison. Part 2B enables a comparison using the databanks.[11]

4.31 A similar issue arises under Part 3 with databank compulsion notices. Should an officer who has arrested a person require that person to provide a sample under Part 2B for the Temporary Databank prior to charging them (the sample could then be transferred to the databank on conviction), or should the officer ask for a databank consent sample (also under Part 3) or wait to see if the person is convicted and then obtain the profile though

9 Criminal Investigations (Bodily Samples) Amendment Bill 2009 (14-1) (explanatory note) at 1.

10 Police policy is not to send any sample obtained under Part 2B to ESR for analysis until charges are laid. If no charges are laid within the two month window the sample is destroyed. Police Manual *DNA Sampling* at 53.

11 Criminal Investigations (Bodily Samples) Act 1995, s 24R(1)(a). However, for such a comparison to occur, the crime scene profile would need to be uploaded onto the Crime Sample Databank (ESR does not conduct a one-to-one comparison of a crime scene profile and the known person databank). The results of any comparison would not be able to be used as evidence against the person, and a suspect sample would then need to be obtained from the person. See Chapter 8 for further discussion on this and the role of section 71A of the Criminal Investigations (Bodily Samples) Act 1995 regarding what can be used as evidence.

issuing a databank compulsion notice (under Part 3)? The advantage of obtaining the sample under Part 2B is that the person who has been arrested is required to provide a sample, and after charging the person, a comparison can be made to the CSD. As we explain in Chapter 11, the answer to this question is almost always the same: obtain the sample under Part 2B. For that reason, databank compulsion notices under Part 3 are now rarely used to obtain DNA profiles from convicted persons for the DPD. Instead, since 2010, the DPD has been mainly populated by profiles transferred from the Temporary Databank.[12]

Triggering offences

4.32 Before the 2009 amendment (which came into effect in two stages) the compulsory procedures in Parts 2 and 3 of the Act could only be used if the offence in question was a "relevant offence". After the second stage came into force, "any imprisonable offence or offence against any of the provisions listed in Part 3 of the Schedule" qualified under Parts 2, 2B (for adults only) and 3 of the Act. The new Part 3 of the Schedule listed a further 22 offences that included selected offences under the Animal Welfare Act 1999, the Arms Act 1983, the Crimes Act 1961, the Land Transport Act 1998 and the Summary Offences Act 1981.[13]

4.33 The wording of the offence threshold "any imprisonable offence or offence against any of the provisions listed in Part 3 of the Schedule" is odd. Significantly, all but one of the offences listed in Part 3 are imprisonable. The exception is the offence of peeping and peering. This is an offence under the Summary Offences Act punishable by a maximum fine of $500.[14] This offence was included as it was considered to be a precursor to more serious sexual offending. Given the extensive overlap, the threshold could have been framed more simply as "an imprisonable offence or the offence of peeping and peering".

4.34 However, Parliament wanted to target the offences listed in Part 3 of the Schedule as a matter of priority. To do this, the Bill came into force in two phases. Phase one expanded the threshold to include the offences listed in Part 3 of the Schedule. Phase two expanded it further to include all imprisonable offences. Again, the long-term effect of this transitional policy was that the terminology inserted into the CIBS Act was overly complex.

4.35 This complexity was compounded by the fact that the equally confusing definition of "relevant offence" (discussed above) still applied after the 2009 amendments but only to obtaining samples under Part 2B from young persons.[15]

12 See Chapter 11 for a discussion of the data.

13 Respectively offences such as wilful ill-treatment of animals, unlawful possession of firearms, aggravated assault, person in charge of motor vehicle causing injury or death and peeping and peering.

14 Summary Offences Act 1981, s 30.

15 The definition of "relevant offence" under Criminal Investigations (Bodily Samples) Act 1995, s 2 now incorporates all the offences listed in the three Parts that comprise the Schedule to the Act, which, in summary, include serious sexual and violent offences, offences punishable by seven years' imprisonment or more (as well as attempts and conspiracies); and selected offences under the Animal Welfare Act 1999, the Arms Act 1983, the Crimes Act 1961, the Land Transport Act 1998 and the Summary Offences Act 1981 (peeping and peering). Of the relevant offences, 23 have a maximum penalty of less than seven years imprisonment, 20 of which are listed in Part 3 of the Schedule added in 2009.

The current Act

4.36 In addition to the amendments described above, numerous other changes were made to the CIBS Act in 2003 and 2009. For example, in 2009 the District Court became responsible for issuing suspect and juvenile compulsion orders instead of the High Court. (To complicate matters further, we note that the very recently passed omnibus Act – the Courts Matters Act 2018 - now permits either Court to deal with applications for suspect compulsion orders although applications for juvenile compulsion orders will only be able to be made in the District Court (which includes the Youth Court.))[16] Similar small changes were also made in 2005, 2008, 2013 and 2015. Individually, these amendments did not have as much of an impact on the overall coherence of the CIBS Act as those we have described above. Collectively, however, they have added to its increasing complexity and inaccessibility.

4.37 By way of summary, the CIBS Act now consists of the following:

- **Part 1 – Preliminary provisions.** This has been heavily amended on multiple occasions to incorporate new and amended definitions.
- **Part 2 – Obtaining bodily samples from suspect.** Aside from the jurisdiction changing for suspect and juvenile compulsion orders (see [4.36]), the availability of mouth swabbing and the lower offence threshold for sampling, this is relatively similar to the original Part 2. Suspect samples are still obtained under this Part.
- **Part 2A – Obtaining buccal sample from suspect who is child or was child when offence for which suspect may not be lawfully prosecuted.** This was inserted in 2003 and is seldom used.
- **Part 2B – Taking bodily sample from person arrested or intended to be charged with imprisonable offence or offence listed in Part 3 of Schedule.** This was inserted in 2009 and is routinely used. Use of Part 2B has now overtaken use of Parts 2 and 3 of the CIBS Act.
- **Part 3 – DNA Profile Databank.** This has been heavily amended to provide for databank compulsion notices instead of databank compulsion orders. As with Part 2, there have also been amendments concerning buccal sampling, the threshold and court jurisdiction. Databank samples by consent can still be obtained under this Part (for those 17 years and over).
- **Part 4 – Procedure for taking bodily samples.** This has been heavily amended to accommodate buccal sampling and various other changes to the Act.
- **Part 5 – Miscellaneous provisions.** This is relatively similar to the original Part 5.

CROSS-JURISDICTIONAL COMPARISON

4.38 Table 1 provides a snap shot of how the CIBS Act compares with legislation governing the use of DNA in criminal investigations in comparable jurisdictions overseas.

Table 1: Cross jurisdictional comparison

[16] The explanatory note to the Court Matters Bill noted that amendments to the Criminal Investigations (Bodily Samples) Act 1995 (alongside 10 other Acts) were being made to improve the efficiency, effectiveness and timeliness of the courts: Court Matters Bill 2017 (285-1) (explanatory note) at 4.

	NEW ZEALAND	SCOTLAND	UNITED KINGDOM	IRELAND
Name	National DNA Profile Databank (DPD)	Scottish DNA Database	National DNA Database (NDNAD)	DNA Database System
Date established	1995	1995	1995	2015
Legislation	Criminal Investigations (Bodily Samples) Act 1995	Criminal Procedure (Scotland) Act 1995, ss 18–20	Police and Criminal Evidence Act 1984	Criminal Justice (Forensic Evidence and DNA Database System) Act 2014
Statutory responsibility	New Zealand Police	Police Scotland	Home Office	Forensic Science Ireland (an associated office of the Department of Justice and Equality)
Day-to-day administration	Institute of Environmental Science and Research (ESR)	Police Scotland	Home Office	Forensic Science Ireland
Forensic analysts	ESR	Scottish Police Authority Forensic Services (SPSA)	Various NDNAD approved laboratories	Forensic Science Ireland
Independent oversight body (Bodies are classed as independent if they include at least one representative who does not have statutory responsibility or responsibility for the day-to-day administration of a databank/database.)	None	None	NDNAD Strategy Board (statutory) Biometrics Commissioner (statutory) Forensic Science Regulator (non-statutory) Biometrics and Forensics Ethics Group (non-statutory)	Statutory Oversight Committee (statutory)
Structure of databank(s) in legislation	Two known person databanks: DPD and Temporary Databank	One known person database: Scottish DNA Database	One known person database: NDNAD Other legislation governs: - Counter Terrorism DNA Database - Missing Persons Database - Vulnerable Persons Database	One database system consisting of the following divisions and indexes: - Investigation - Crime scene - Reference - Elimination (An Garda Síochána) - Elimination (crime scene investigators) - Elimination (prescribed persons) - Identification - Unknown persons - Missing persons
DNA profile	21 loci	24 loci	16 loci	16 loci
Known person databank collection thresholds	Intention to charge with or convicted of an imprisonable offence	Charged with or convicted of an imprisonable offence	Arrested or convicted of a recordable offence (any offence punishable with imprisonment and any other offence mentioned in the National Police Records (Recordable Offences) Regulations 2000	Arrested and detained or convicted of an offence punishable by 5 years' imprisonment or more

CANADA	COMMONWEALTH - AUSTRALIA	VICTORIA - AUSTRALIA	NEW SOUTH WALES - AUSTRALIA	UNITED STATES
National DNA Data Bank (NDBB)	National Criminal Investigation DNA Database (NCIDD)	Victorian DNA Database	NSW DNA Database	Combined DNA Index System (CODIS)
2000	2001	1998	2000	1998
DNA Identification Act 1998	Crimes Act 1914 (Cth), Part 1D	Crimes Act 1958 (Vic), ss 464R-464ZL	Crimes (Forensic Procedures) Act 2000	DNA Identification Act 1994
Royal Canadian Mounted Police (RCMP)	Australian Criminal Intelligence Commission (ACIC)	Chief Commissioner of Police	Secretary of the Ministry of Health	Director of the Federal Bureau of Investigation (FBI)
RCMP	ACIC	Victoria Police Forensic Services Department	NSW Health Division of Analytical Laboratories	FBI
Six RCMP laboratories and two provincial laboratories	Various NCIDD approved laboratories	Victoria Police Forensic Services Department	NSW Health Division of Analytical Laboratories	Various CODIS-approved laboratories
National DNA Data Bank Advisory Committee (statutory) Privacy Commissioner (statutory)	Commonwealth Ombudsman (statutory)	Complaints can be made to the Health Complaints Commissioner, Ombudsman or Information Commissioner (statutory)	DNA Advisory Committee (statutory)	National Forensic Science Commission (statutory) Scientific Working Group on DNA Analysis Methods (non-statutory) Office of the Inspector General US Department of Justice (statutory)
One database system consisting of the following indexes: - Crime scene - Convicted offenders - Victims - Voluntary donors - Human remains - Missing persons - Relatives of missing persons	One database system consisting of the following indexes: - Crime scene - Serious offenders - Suspects - Volunteers (limited purpose) - Volunteers (unlimited purpose) - Unknown deceased persons - Missing persons - Statistical	One database system consisting of the following indexes: - Crime scene - Serious offenders - Suspects - Volunteers (limited purpose) - Volunteers (unlimited purpose) - Unknown deceased persons - Missing persons	One database system consisting of the following indexes: - Crime scene - Offenders - Suspects - Volunteers (limited purpose) - Volunteers (unlimited purpose) - Unknown deceased persons - Missing persons	One database system consisting of the following indexes: - Forensic (casework) - Convicted offender - Arrestees - Detainees - Legal - Unidentified human remains - Missing persons - Relatives of missing persons
14–18 loci	21 loci	21 loci	21 loci	20 loci
Convicted of a prescribed serious offence	A suspect in relation to or convicted of an offence punishable by 5 years' imprisonment or more	A suspect in relation to or convicted of a prescribed serious offence	A suspect in relation to or convicted of an offence punishable by 5 years' imprisonment or more	Varies between States

4.39 Table 1 shows that the legislation governing the use of DNA in criminal investigations in New Zealand differs in two main areas:

(a) The CIBS Act only regulates the known person databank. This is similar to the approach adopted in the United Kingdom and Scotland, both of which also established their databanks in the mid-1990s. However, the more common approach in recent years has been for equivalent legislation to establish one DNA profile database consisting of multiple different indices. The indices regularly include a crime scene index, a suspect index, an offender index, multiple volunteer indices, a missing person index and an unidentified human remains index. Legislation following this approach also generally sets out the rules for collecting and matching the profiles in the different indices. This reflects a more comprehensive approach to regulation.

(b) The CIBS Act does not establish an independent oversight body, nor has such a body been established in New Zealand through non-statutory means. Scotland is the only other comparable country in this position. However, in March 2018 the Scottish Government formally accepted recommendations to create a biometrics ethics advisory group and a biometrics commissioner. Both would provide independent oversight of the use of DNA in criminal investigations in Scotland.[17]

THE DECISION TO AMEND OR REPLACE AN ACT

4.40 Having briefly explained how the CIBS Act was developed and how it compares with its international counterparts, we use the *Legislation Guidelines* approved by Cabinet to consider whether to amend or replace the current Act.

4.41 The *Legislation Guidelines* offer the following advice:[18]

> If existing legislation is to be heavily amended (or is already old or heavily amended), consideration should be given to replacing it instead. A key factor to consider is accessibility. If multiple amendments will cause the resulting law to be so complex it becomes difficult to understand, replacing the legislation should be preferred. Complexity can arise through grafting new policies onto existing frameworks so that the overall coherence of the legislation is lost. On the other hand, accessibility should be balanced against any disadvantage in disrupting settled understandings of the law.

THE SEVEN FUNDAMENTAL PROBLEMS

4.42 Bearing the advice in the *Legislation Guidelines* in mind, we have identified what we consider to be seven fundamental problems with the CIBS Act. This chapter has already foreshadowed many of them. These problems are not necessarily controversial in terms of how they should be addressed, but they could not be easily resolved by simple amendment to a few provisions or even a Part of the CIBS Act. They are systemic and fundamental to how the entire Act operates.

4.43 These problems are explored in more detail elsewhere in this issues paper. In the overview below, we refer the reader to those discussions rather than repeating them at

17 The recommendations were made by the *Independent Advisory Group on the Use of Biometric Data in Scotland* (The Scottish Government, March 2018). The Scottish Government has formally accepted many of the recommendations of the 2018 Independent Advisory Group: *Scottish Government Response to the Report of the Independent Advisory Group on Biometric Data in Scotland* (March 2018).

18 Legislation Design and Advisory Committee *Legislation Guidelines* (March 2018) at 17.

length here. The purpose of this overview is to make what we see as a clear case for comprehensive reform.

The purpose of the Act is not clear

4.44 As explained in Chapter 2, legislation should be fit for purpose. This requires a clear purpose that has been robustly tested. Our view is that the purpose of the CIBS Act is not clear.

4.45 Notably, the CIBS Act does not contain a purpose provision. While a purpose provision could easily be inserted on its own, the problem is that the policy behind the original Act and the policies underlying the 2003 and 2009 amendments are very difficult to reconcile. Furthermore, the legislative history suggests that exculpating the innocent, deterring criminal offenders and reducing Police costs were all important drivers behind the original Act. However, there are virtually no provisions in the Act that reflect those original intentions. The goal of facilitating the identification and prosecution of offenders is somewhat vague, as we have discussed in Chapter 2. The list of over 100 offences in the Schedule suggests a focus on serious sexual and violent offenders. In contrast the remainder of the Act suggests a more general focus.

The internal structure of the Act is confusing

4.46 As noted at [4.28] to [4.31] above, and as we explore in Chapters 8 and 11, it is not immediately obvious how Parts 2, 2B and 3 of the Act fit together. The extensive overlap has caused considerable uncertainty and has made the Act difficult for a lay person to understand. In particular, the creation of two statutory known person databanks is problematic. The CIBS Act gives the impression that the Temporary Databank and the DPD are two distinct databanks, but in an operational sense, they are used by Police in virtually the same way. We discuss this further in Chapter 12.

The forms, terminology and retention periods in the Act are overly complex

4.47 The CIBS Act contains an array of different procedural rules. The rules apply to any police officer obtaining a biological sample from a known person. In turn, these rules prescribe the use of various consent and notification forms to accommodate this.

4.48 There are four main factors that determine the applicable procedural rules and forms in any given case:

- The purpose of the sample (that is, whether it is a Part 2, 2A, 2B or 3 sample).
- The age of the person (a child, a young person or an adult over 17 years).
- Whether the sample is being provided by consent or compulsion.
- The sampling method (mouth swab, fingerprick or venous syringe).

The CIBS Act allows for more than 35 possible combinations of these factors. Slightly different procedures must be followed in each of these scenarios, and Police therefore have 70 different forms.[19]

4.49 To add to the complexity, it is not always easy to determine whether a case involves a triggering offence in the first place. This is discussed at [4.19] to [4.23] and [4.32] to

[19] This includes the forms pursuant to the Regulations, affidavits and applications, procedural forms, forms for methods of sampling and general police forms.

[4.35] above. A further difficulty is that, in respect of some requirements in the CIBS Act, a "related offence" may suffice, but that phrase is defined narrowly, which has caused problems for Police.[20]

4.50 As we explore in Chapter 14, these complexities are mirrored in the CIBS Act provisions governing retention periods. These are the set statutory time periods during which Police can retain biological samples from known persons and the DNA profiles generated from them. The applicable time period depends first on whether a sample or a profile is being considered. Then it is necessary to consider the first three factors listed at [4.48] and the stage of the proceedings (that is, whether charges have been laid, whether a conviction has been entered and the nature of the sentence). This provides a vast number of possible permutations.

The privacy concerns have significantly changed

4.51 As explained at [4.8], the original CIBS Act only enabled blood sampling. This was a grave intrusion on bodily integrity (especially since reasonable force could be used in certain circumstances) so extensive safeguards were introduced around the procedure itself. When mouth swabbing was introduced in 2003, these safeguards were largely copied and applied to this procedure as well, even though it was less intrusive. The rationale for this was that mouth swabbing still involved the State searching inside a person's body. The person's bodily integrity was still compromised. While there are parallels between the concept of te tapu o te tangata and the concepts of the inherent dignity of the person and bodily integrity, no express consideration of personal tapu or other tikanga has occurred in making these amendments.

4.52 As we explain in Chapter 8, it may soon be possible to avoid internal body searches entirely. DNA profiling kits may already be sufficiently sensitive to generate consistently a full DNA profile from tape placed on the back of a person's hand or from the skin cells left by a fingerprint. If this type of sampling becomes available and is used on a regular basis, some of the protections in the Act concerning the sampling process itself will no longer be required.

4.53 The more serious privacy concern will be the amount of personal information that can be generated from a biological sample, as we discuss below. The tikanga implications of this, and in particular the potential for recognition of a collective privacy interest in DNA as whakapapa information, will need to be considered. Recognising a collective privacy interest in DNA may also accord with international developments in privacy law.[21]

The science has advanced

4.54 When the CIBS Act was enacted in 1995, there was very little discussion about what the DNA analysis process actually involved. During the extensive debates on the original Bill, only three opposition MPs commented on the amount of personal information that DNA

20 Police has advised that the requirement for a single triggering offence creates difficulties when charging for multiple incidents, for example, five separate burglaries over a period of a week. If the charge for a triggering offence does not result in a conviction, but the charges for the four other incidents do, Police cannot retain the DNA sample collected. While the other incidents might be conducted in a similar manner, they do not comprise substantially the same act and are therefore not "related offences" under the definition in the Act.

21 Office of the Australian Information Commissioner "What is personal information?" (May 2017) <www.oaic.gov.au> at 12. See also discussion of collective privacy in Chapter 9.

analysis could potentially reveal.[22] By contrast, several MPs drew comparisons to police officers obtaining fingerprints and conducting breath tests.[23] The Parliamentary Debates in 2003 and 2009 also involved similar comparisons.[24]

4.55 This lack of concern about informational privacy probably stemmed from the initial belief among scientists that traditional STR profiling targeted "junk" DNA left over from human evolutionary development.[25] As such, it was thought that it revealed no personal information, beyond sex.

4.56 Scientists' understanding of DNA has grown exponentially in recent years. We now know that there is no such thing as "junk" DNA. Scientists have also identified connections between the loci targeted by traditional STR profiling and a small number of medical genetic disorders.[26] Further, as we explain in Chapter 7, vast amounts of information about a person can now be generated from a biological sample, and there is no statutory limit on the amount of information that could be included in a DNA profile. This raises questions about how and whether this information could be used in criminal investigations.

4.57 As a result, new DNA analysis techniques have been developed such as forensic DNA phenotyping, which aims to predict physical appearance (Chapter 6), and familial searching, which aims to identify suspects through their family members (Chapter 13). As we discuss in Chapter 7, it is even possible that whole genome sequencing will become a routine part of the DNA profiling process. These developments raise human rights, Treaty of Waitangi, ethical and tikanga issues as well as issues around informational privacy.

22 Judith Tizard (25 July 1995) 549 NZPD 8079 and (10 August 1995) 549 NZPD 8630 expressed concerns about access to health information and information about genetic relationships; Tau Henare (10 August 1995) 549 NZPD 8636 highlighted that victims' DNA profiles could be used against them in later investigations and commented that the profiles could be used to define who is Māori and Richard Northey (12 October 1995) 551 NZPD 9724 alluded to the possibility of familial searching.

23 Hon Phil Goff suggested there is a "clear parallel" to compulsory fingerprinting and the evidential breath analysis or blood sampling of suspected drinking drivers: (9 August 1995) 549 NZPD 8567. Rick Baker MP and Clem Simich also expressed similar sentiments: (25 July 1995) 545 NZPD 8079 and 8081.

24 On introduction of the Amendment Bill in 2009, the Hon. Simon Power stated that the Government's position was that "a DNA sample simply constitutes the modern fingerprint". He went on to say that the risks of "inappropriate disclosure of an individual's confidential genetic information are very low" as only a small portion of an individual's total DNA profile is obtained and only "a small group of specialist scientists" can decipher it: (10 February 2009) 652 NZPD 1117–1118. Stephen Franks asked what the difference is "between a fingerprint and DNA? What is the difference between taking a photograph and taking a DNA sample?" (21 October 2003) 612 NZPD 9450. Marc Alexander also asked "How is [DNA sampling] any more a breach of personal liberties than the current requirement of obtaining fingerprints for all arrests?" (21 October 2003) 612 NZPD 9453.

25 Initially, it was thought that the regions of the human genome that do not code for proteins served no practical purpose. However, it has since been discovered that non-coding DNA is not "junk". One of its functions is that it 'switches' coding regions of the genome on and off. See Kat Arney *Herding Hemingway's Cats: Understanding How Our Genes Work* (Bloomsbury Publishing, London, 2016) at 23-24.

26 In May 2009 Dr Martin Somerville, President of the Canadian College of Medical Geneticists, testified before the Canadian senate and stated:

> The information that is obtained from the analysis of the 13 DNA markers used for identification purposes can have direct medical relevance. There are numerous claims that these regions are anonymous and, other than gender, do not provide specific medical or physical information about the donor, but the use of these markers can, in fact, detect the presence of changes in the copy number of very large segments of DNA. In other words, it is not designed to do this, but it can do it by circumstance. It is not a very sensitive way of getting medical information, but it can. The list of conditions that this type of profiling can detect includes, but is not limited to, any difference in the number of sex chromosomes as well as Down syndrome or what is commonly known as trisomy 21. DNA profiling will very effectively detect that. No DNA information is truly anonymous, since any portion of the DNA has potential to reveal personal details about an individual. It is only since the completion of the human genome project in 2003 that the complexity and relevance of what was previously labelled as junk DNA has been realized. In essence, that term has fallen out of favour.

See Standing Senate Committee on Legal and Constitutional Affairs *Public Protection, Privacy and the Search for Balance: A Statutory Review of the DNA Identification Act* (Canadian Senate, June 2010) at 51–52.

4.58 The comparison to fingerprinting is no longer apt. As we explain in Chapter 5, Parliament will need to consider these issues afresh.

The Act is not sufficiently comprehensive

4.59 Several chapters in this issues paper are dedicated to matters that are not currently addressed in the CIBS Act but potentially should be. This includes Chapters 5, 6, 8, 9, 10 and 13.

4.60 As noted above, a decision to adopt more comprehensive legislation in this area would be in keeping with the recent trend in comparable jurisdictions.

There is no independent oversight body

4.61 Issues with the lack of independent oversight are discussed throughout this paper and form the subject of Chapter 15. There is no oversight or auditing to ensure NZBORA and Treaty of Waitangi consistency in practice, nor to monitor privacy and tikanga issues. In short, the use of DNA in criminal investigations is constantly changing, and those changes are raising significant legal, ethical and tikanga issues. The Act is not able to keep up to date with the pace of these changes. Comparable jurisdictions have established a variety of different independent oversight bodies to identify and help to address areas of concern about the use of DNA in criminal investigations. Most, but not all, of these bodies have been established by statute to confer the powers considered necessary for meaningful oversight. For the reasons we outline in Chapter 15, our preliminary view is that New Zealand should also consider establishing such a body.

CONCLUSION

4.62 We consider that the current CIBS Act is overly complex and inaccessible. It is difficult for police officers and lawyers to understand and navigate. It would be virtually impossible for the average person to work out how the system works in practice and what their rights are, without expert assistance. Furthermore, the Act has not kept pace with developments in science or international trends. Therefore, our preliminary view is that it is time for a new Act.

Q4 Do you think that the CIBS Act should be repealed and replaced with a new Act? Why or why not?

Part B

Casework

CHAPTER 5

Crime scene examinations

INTRODUCTION

5.1 This chapter looks at the first step in New Zealand Police's casework process – obtaining crime scene samples. This chapter explains what a crime scene sample is and what a crime scene examination involves. We then outline Police's legal authority for collecting and analysing crime scene samples.

5.2 This information provides context for the remainder of this issues paper, particularly Chapters 6 and 7, which focus on specific techniques for analysing crime scene samples and generating DNA profiles, which are important next steps in the casework process.

5.3 This chapter also looks at why DNA profiling is only able to be used in a very small percentage of criminal investigations.

WHAT IS A CRIME SCENE SAMPLE?

5.4 The Criminal Investigations (Bodily Samples) Act 1995 (CIBS Act) does not define "crime scene sample", but it does contain an indirect description. This description is in the provision that enables a District Court Judge to make a suspect compulsion order.[1]

5.5 Under this provision, a judge must be satisfied of five things before making a suspect compulsion order, one of which is that "material reasonably believed to be from, or genetically traceable to" the offender has been found or is available:

(a) at the scene of the offence; or

(b) on the victim of the offence; or

(c) from within the body of the victim of the offence or from anything coming from within the body of the victim that is reasonably believed to be associated with the offence (for example, a foetus);[2] or

(d) on anything worn or carried by the victim when the offence was committed; or

1 Criminal Investigations (Bodily Samples) Act 1995, s 16(1).

2 The phrase "or genetically traceable to" was inserted into section 16(1)(b) of the Criminal Investigations (Bodily Samples) Act 1995 by the Criminal Investigations (Bodily Samples) Amendment Bill 2003. Subsection 16(1)(b)(iii) was also inserted at this time. The impetus for the amendment came from *R v T* [1999] 2 NZLR 602 (HC). The victim in *R v T* was severely intellectually disabled. She had been raped, became pregnant and then miscarried. Police obtained foetal tissue and sought to compare it to potential suspects. Forensic analysis of a blood sample taken by consent from one of the victim's care workers indicated that he was the likely offender. However, the Court ruled this evidence inadmissible on the basis that Police had not correctly followed the consent procedure in the Criminal Investigations (Bodily Samples) Act 1995 when obtaining the suspect's blood sample. The Court then considered whether, if the suspect refused to provide a second sample by consent, a suspect compulsion order might be available. The Court concluded that the original version of section 16(1)(b) was not broad enough to include foetal tissue, as the tissue could not be described as being "material reasonably believed to be from" the offender.

(e) on any person or thing associated with the commission of the offence.

5.6 This description is very broad but case law indicates that it is workable in practice.[3] It also aligns with the approach taken in other common law countries.[4] Therefore, this is the definition of crime scene sample that we use throughout this issues paper.

5.7 Commonly found crime scene samples include blood, semen, saliva and skin cells (which can be collected using swabs) and items that may have bodily fluids or skin cells on them such as bottles, cigarette butts, clothing and chewing gum.[5]

CRIME SCENE EXAMINATIONS

5.8 In a similarly broad definition, the Police Manual explains that "a crime scene is any place an offender has been in relation to a crime".[6] The Police Manual adds:[7]

> Scenes are likely to include:
>
> - the place where the offence occurred or where the body, property or associated evidence was found
> - the body itself in cases of homicide
> - all people who are associated with the crime, whether living or dead, may be considered as crime scenes
> - any vehicles used by the suspects
> - suspects themselves
> - the victim's and suspect's home and workplace.

5.9 Ordinarily, a crime scene examination is an important early step in any criminal investigation. The examination may assist in establishing what may have happened and whether an offence has been committed. It may also assist in identifying suspects, victims and/or witnesses and in verifying any statement that police officers subsequently obtain from those people.[8]

3 The following cases, which all concern section 16(1)(b)(v) of the Criminal Investigations (Bodily Samples) Act 1995, give a sense of the limits of the definition: *R v Taylor* HC Palmerston North CRI-2005-454-6, 7 April 2005, Ronald Young J, in which a cigarette butt that was found five days after an attempted murder in a car that was linked to the offence by other evidence was found to be a "thing associated with the commission of the offence". *R v Robinson* HC Auckland CRI-2004-004-10413, 16 June 2006, Asher J, in which a glove was found in a car one or two days after a burglary. The car was indirectly linked to the offending through other evidence. The glove could not be described as a "thing associated with the commission of the offence". *Police v W* HC Wellington CRI-2004-485-54, 28 June 2004, in which a witness to a drive-by shooting described the offender as wearing a dark jacket. A dark jacket was found at the suspect's address with a round of ammunition in the pocket. The suspect denied it was his jacket but said he owned a similar one. There was a sufficient link between the jacket and the offence for it to be described as "a thing associated with the commission of the offence". *Police v Y* HC Palmerston North CRI-2006-454-44, 6 November 2006, Mallon J, in which a jacket was found on the street with latex gloves and a cloth in the pocket. Black track pants were found nearby. The clothing appeared to have been thrown from a car. The clothing matched the description of clothing worn by an offender during an armed robbery the previous day. The relevant glove was found to be "a thing associated with the commission of an offence".

4 See the broad definitions of "crime scene" in the UK College of Policing *Investigation Manual* (Authorised Professional Practice, 5 October 2018) at Managing Investigations 9.1; Law Enforcement (Powers and Responsibilities) Act 2002 (NSW), s 3 definition of "crime scene"; and Police Powers and Responsibilities Act 2000 (Qld), at s 163B.

5 We refer to all of these as "biological samples". See the Glossary at the beginning of this issues paper.

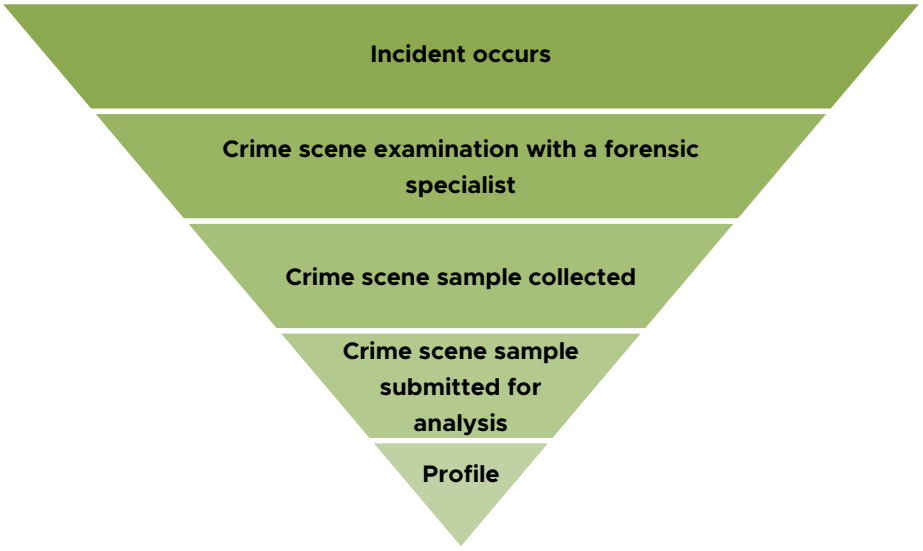
6 Police Manual *Crime Scene Examination* at 3.

7 Police Manual *Crime Scene Examination* at 3.

8 Police Manual *Crime Scene Examination* at 4.

5.10 DNA profiling can be a valuable investigative tool, but crime scene examinations do not always have a forensic component to them. Even if a forensic specialist attends and obtains a crime scene sample, the sample is not always sent to the Institute of Environmental Science and Research (ESR) for analysis, and even if ESR does analyse a sample, it may not be possible to generate a usable DNA profile.

5.11 There is a significant difference between the overall number of incidents that occur and the number of cases in which a usable DNA profile is generated. This number diminishes at each step in the process, as illustrated below:



Forensic specialists do not attend all crime scenes

5.12 Whether a forensic specialist attends a crime scene examination largely depends on the nature and seriousness of the offending.

5.13 For some offences, it is standard practice for a forensic specialist to be involved. For example, Police has a target of attending all reported burglaries of domestic dwellings within 48 hours.[9] In the vast majority of these cases, a specially trained Police Crime Scene Attendant or Scene of Crime Officer will attend, alongside other police officers, to collect exhibits with forensic potential.[10] It is also standard practice for Police to encourage sexual assault complainants to undergo a medical examination if there is any chance that genetic material traceable to the offender may still be present.[11] These examinations are conducted by specially trained doctors.

5.14 For particularly serious offending, the Services Agreement between Police and ESR explains that police officers may need to engage one or more forensic scientists from ESR to conduct the crime scene examination.[12] This may be required in the following categories of cases:[13]

9 New Zealand Police *Annual Report 2016-2017* (November 2017) at 14.

10 Catherine Gardner "Does Police Culture Prevent the New Zealand Police from Making the Best Use of DNA Technology to Investigate Crime?" (PhD Thesis in Criminology, Auckland University of Technology, 2014) at [1.6].

11 New Zealand Police "Video Resources: Why don't people report sexual assaults?" <www.police.govt.nz/>.

12 See New Zealand Police and the Institute of Environmental Science and Research *Forensic Science Services Agreement* (2018) at [66]. See Key terms and actors at the beginning of this issues paper for further discussion of this agreement and the contractual basis to the relationship between Police and ESR.

13 New Zealand Police and the Institute of Environmental Science and Research *Forensic Science Services Agreement* (2018) at [66].

- Homicide or suspicious death.
- Violence offence involving serious injury or risk of serious injury, including serious sexual assault.
- Illicit drug laboratory.
- A serious crime where scale, complexity or public interest considerations are such that Police believe it is appropriate to engage the specialist crime scene examination services of ESR.

5.15 We understand that, in relation to all other offending, police staff will decide on a case-by-case basis whether a forensic specialist should attend the crime scene examination.

There may not be any crime scene samples suitable for collection

5.16 When considering a potential sample, a specialist will take into account all of the circumstances of the case. How likely is it that the sample was left behind by the offender? How high is the risk of contamination? Are elimination samples available?[14] The specialist will also consider whether the sample is of a kind that is suitable for DNA profiling – some biological samples and items are much more likely to yield a DNA profile than others. Finally, in relation to the skin cells in fingerprints, a specialist may need to prioritise fingerprinting over DNA profiling. DNA profiles can be obtained from marks after most fingerprinting techniques (although the amount of DNA recovered will be reduced), but the reverse is not possible.[15]

Not all crime scene samples are sent to ESR for analysis

5.17 Police is divided into 12 districts, and each has its own forensics budget. District Crime Managers are responsible for the budget and oversee the decisions as to which samples will be sent to ESR for analysis.[16] The decisions are made on a case-by-case basis by the District Crime Manager.

5.18 Our understanding is that the District Crime Manager will consider many of the same factors that the crime scene examiner will have considered when deciding whether to collect the crime scene sample in the first place as well as the following:

(a) Whether there is evidence that an offence has been committed. Police has explained that generally crime scene samples are not submitted to ESR for analysis unless it has been established that they relate to a crime.[17]

(b) The potential evidential value of the sample. This will depend on the circumstances of the case, where the sample was found and its apparent quality.[18]

(c) The seriousness of the offending. The Police Manual states that, particularly in volume crime cases (that is, theft, burglary and vehicle crime), it needs to be considered whether the forensic relevance outweighs the cost of analysis.[19]

14 Samples from known people who may have been at the crime scene, such as victims, third parties or investigators. The aim of comparing these samples to a crime scene sample is to isolate and identify any DNA that may belong to the offender or any other person investigators are seeking to identify.

15 Police Manual *DNA Evidence at Crime Scenes* at 10.

16 Catherine Gardner "Does Police Culture Prevent the New Zealand Police from Making the Best Use of DNA Technology to Investigate Crime?" (PhD Thesis in Criminology, Auckland University of Technology, 2014) at [1.6].

17 See Police's response to a request under the Official Information Act 1982 as quoted in *Police v Shull* [2017] NZDC 17314, [2018] DCR 587 at [32].

18 It should be noted that fingerprint analysis is completed prior to DNA submission in many volume crime cases.

19 Police Manual *DNA Evidence at Crime Scenes* at 10.

(d) Whether there is already a clear suspect and a strong Crown case. This factor can cut both ways.[20] If there is a clear suspect, an investigator may choose to send the sample to ESR for analysis to obtain the best possible evidence for any trial. Alternatively, in the same circumstances, an investigator may decide that sending the sample to ESR would not be cost-effective because the investigation is likely to result in a conviction anyway. If there is no clear suspect or there is a marginal Crown case, the decision to send the sample to ESR for analysis is likely to be much more straight-forward.

It may not be possible for ESR to obtain a usable result

5.19 As we discussed in Chapter 3, even if a crime scene sample is sent to ESR for analysis, it may not be possible to generate a usable DNA profile. There may be insufficient amounts of DNA in the sample, there could be DNA from too many contributors; or the DNA may be too degraded due to environmental factors.

DNA only relevant in a small number of cases

5.20 At present, there is very little data on the number of criminal investigations in New Zealand where a usable DNA profile is generated from a crime scene sample. However, DNA profiling is either not relevant or not possible in the majority of criminal cases.

5.21 In 2010, the United Kingdom Home Office estimated that DNA is found at less than 1 per cent of crime scenes in the United Kingdom.[21] A 2014 PhD thesis found that the figure in New Zealand is likely to be similar, based on a study of Central Auckland investigations into reported offences in 2005.[22]

5.22 The percentage of cases where DNA is found at the crime scene may be slightly higher than average in volume crime cases. A 2008 study by ESR found that samples from 2 per cent of volume crime cases were submitted to ESR for profiling, with scientists being able to extract a DNA profile from 64 per cent of those samples.[23]

5.23 These percentages will probably rise as the sensitivity of DNA profiling kits increases and the cost of analysis decreases. Nevertheless, for the reasons described above, in those cases where DNA profiling may be relevant, the general trend of diminishing returns at each step in the process is likely to continue.

THE LEGAL AUTHORITY FOR CRIME SCENE EXAMINATIONS: ISSUES AND OPTIONS

5.24 The CIBS Act does not contain any provisions that deal with crime scene examinations or the collection of crime scene samples. Instead, the process is governed by:

20 Catherine Gardner "Does Police Culture Prevent the New Zealand Police from Making the Best Use of DNA Technology to Investigate Crime?" (PhD Thesis in Criminology, Auckland University of Technology, 2014) at [6.2].

21 House of Commons Home Affairs Committee *The National DNA Database* (Session 2009–2010 Eighth Report, 4 March 2010) as cited in Catherine Gardner "Does Police Culture Prevent the New Zealand Police from Making the Best Use of DNA Technology to Investigate Crime?" (PhD Thesis in Criminology, Auckland University of Technology, 2014) at 87.

22 Catherine Gardner "Does Police Culture Prevent the New Zealand Police from Making the Best Use of DNA Technology to Investigate Crime?" (PhD Thesis in Criminology, Auckland University of Technology, 2014) at [4.3]. We discuss these findings further in Chapter 10.

23 J Buckleton *DNA Solve More Burglaries* (Environmental Science and Research Ltd, 2008) as cited in Catherine Gardner "Does Police Culture Prevent the New Zealand Police from Making the Best Use of DNA Technology to Investigate Crime?" (PhD Thesis in Criminology, Auckland University of Technology, 2014) at [4.3].

(a) the Search and Surveillance Act 2012, which contains general rules about gathering evidence in investigations; and

(b) the common law, which applies to crime scene samples found in public places.

5.25 Work has also been done to consider the impact of Māori cultural values on crime scene management, particularly where a homicide is involved.[24] Police iwi liaison officers may be appointed to give advice on tikanga, and work with iwi and whānau in investigations involving Māori.[25]

The Search and Surveillance Act 2012

5.26 The rules around the collection of crime scene samples from people and private property are primarily in the Search and Surveillance Act. Under that Act, such samples are treated in the same way as any other evidence gathered during the course of an investigation.[26]

5.27 The three different ways in which Police can collect a crime scene sample under the Search and Surveillance Act are:

(a) by obtaining and executing a search warrant;[27]

(b) by exercising a statutory search power;[28] or

(c) by conducting a search by consent.[29]

All three ways result in Police being able to seize the crime scene sample on the basis that it may constitute "evidential material" in respect of the offence that is under investigation.[30]

5.28 The Search and Surveillance Act defines evidential material as "evidence of the offence, or any other item, tangible or intangible, that is of relevance to the investigation".[31] There is an issue as to whether a bodily fluid that is found at a crime scene (for example, blood) falls within the meaning of "item".[32] We discuss this issue in Chapter 9 and suggest that

24 Maui Hudson and others "The Impact of Māori Cultural Values on Forensic Science Practice in New Zealand" (2008) 53 JFS 380 at 381.

25 New Zealand Police "Iwi liaison officers" at <www.police.govt.nz>. See also discussion in the context of search and surveillance in Law Commission *Review of the Search and Surveillance Act 2012: Ko te Arotake I te Search and Surveillance Act 2012* (NZLC R141, 2017) at [4.84].

26 In New Zealand, the law treats a crime scene in the same way as any other search scene. For further discussion see Law Commission *Search and Surveillance Powers* (NZLC R97, 2007) at [6.98]–[6.103].

27 Police officers, like any other member of the public, have an implied licence to go onto private property to knock on the door with a view towards speaking with an occupier. If an officer comes across a crime scene, section 117 of the Search and Surveillance Act 2012 gives the officer the power to preserve the scene until a search warrant is obtained pursuant to section 6 of that Act.

28 In certain circumstances, a police officer may be able to seize a crime scene sample in the course of exercising a statutory warrantless search power. For instance, under section 15 of the Search and Surveillance Act 2012, if a police officer has reasonable grounds to suspect that a very serious offence (punishable by a maximum penalty of at least 14 years imprisonment) has been committed; and to believe that evidential material relating to the offence is in a place and will be destroyed if entry is delayed, the officer may enter and search that place.

29 Consent searches are governed by sections 92–96 of the Search and Surveillance Act 2012.

30 Under section 110 of the Search and Surveillance Act 2012, a police officer executing a search power may seize anything that is the subject of the search. Sections 6 (search warrant), 15 (statutory search power) and (indirectly) 92 (consent search) indicate that evidential material is the subject of these searches.

31 Search and Surveillance Act 2012, s 3.

32 See Chapter 9, *T v R* [2015] NZHC 1588 at [79]–[83] and *T (CA438-2015) v R* [2016] NZCA 148. See also Simon France (ed) *Adams on Criminal Law – Rights and Powers* (online ed, Thomson Reuters) at [SS3.17.01], which states that there is probably no difference between the phrase "evidential material" in the Search and Surveillance Act and the phrase "evidence as to the commission of the offence" in its predecessor, the Summary Proceedings Act 1957. The authors

this should be clarified. There is also a related issue that the relevance of a crime scene sample to an investigation is entirely dependent on its subsequent analysis.

5.29 To address this, section 112 of the Search and Surveillance Act empowers Police to seize evidential material that is of "uncertain status". This material may or may not be of relevance to the investigation. To determine if it is relevant, the officer may remove the item for "examination or analysis".[33] The Search and Surveillance Act does not place any limits around what this process may entail.

5.30 Once a crime scene sample has been analysed and is no longer needed for "investigative or evidential purposes", it must be disposed of in accordance with the general rules concerning the retention of evidential material in the Search and Surveillance Act.[34] This raises several issues regarding the retention of crime scene samples, which we discuss in Chapter 14.

5.31 One difficulty is that, strictly speaking, "examination or analysis" of a crime scene sample in isolation will not usually determine its relevance to the investigation, as required by section 112 of the Search and Surveillance Act.

5.32 As we discuss in the Chapter 6, there have been 11 investigations in which ESR has analysed a crime scene sample in isolation to extract information about the potential offender's likely appearance,[35] but in the vast majority of cases crime scene samples are not analysed in isolation. Ordinarily, the analysis process involves a forensic comparison between a crime scene sample and a sample from a known person or the known person databank.[36] This is in stark contrast to other forms of analysis that are conducted pursuant to section 112, such as drug testing and forensic analysis of computers, which are routinely conducted in isolation.

5.33 The Law Commission identified this issue in our original 2007 report *Search and Surveillance Powers*.[37] We recommended that a provision akin to section 112 should be enacted but that it should expressly enable the analysis of evidential material *"(whether by itself or* together *with other material)"* (emphasis added) to determine its relevance.[38] This would make it plain that DNA analysis of crime scene samples was covered. We remain of the view that section 112 would be more readily understood if it was amended to include the italicised phrase.

note: "'Evidence' has always had a broad meaning and covers a range of material that might not necessarily be used as evidence in any criminal prosecution for the suspected offence." The more contentious issue is whether the general search warrant power in section 6 of the Search and Surveillance Act is framed broadly enough to enable a judge to issue a search warrant in respect of a bodily fluid. This depends on the definition of "thing". This issue is discussed in Chapter 9.

33 Search and Surveillance Act 2012, s 112:

> If a person exercising a search power is uncertain whether any item found may lawfully be seized, and it is not reasonably practicable to determine whether that item can be seized at the place or vehicle where the search takes place, the person exercising the search power may remove the item for the purpose of examination or analysis to determine whether it may be lawfully seized.

See also s 110(d), which states that every search power authorises the person exercising it to seize anything that is the subject of a search.

34 Search and Surveillance Act 2012, s 149.

35 In other words, the crime scene sample (or biological sample) has been subject to particular scientific analysis in an attempt to ascertain information about the owner of that sample.

36 See Chapter 6 for further discussion on analysis in isolation and Chapter 7 for forensic comparisons.

37 Law Commission *Search and Surveillance Powers* (NZLC R97, 2007) at [3.47]–[3.61].

38 Law Commission *Search and Surveillance Powers* (NZLC R97, 2007) at [3.60].

The common law

5.34 Crime scene samples that are discovered in public places are not covered by the Search and Surveillance Act because there is no competing property interest at stake. In these instances, police officers may rely on the common law principle that they are lawfully entitled to do what any member of the public can do.[39]

5.35 Under this principle, a police officer is entitled to seize a crime scene sample, such as a cigarette butt, found on a public street. The question of whether the officer can send the sample away for DNA analysis is much more difficult to answer. It depends on whether a member of the public would breach any laws by doing the same thing.

5.36 As we explain in Chapter 9, there is no clear answer to this question. The Human Tissue Act 2008 and the common law tort of privacy may prohibit a member of the public from arranging for DNA analysis in the absence of consent. Section 112 of the Search and Surveillance Act only applies to police officers exercising statutory search powers. It does not apply to officers who collect crime scene samples from public places using common law powers.

5.37 We see no reason why the law in this area should operate differently, depending on whether the sample is found on public or private property. We therefore suggest that there may also be merit in amending section 112 to widen its scope.

5.38 An alternative to amending section 112 of the Search and Surveillance Act in the way described above would be to enact a tailor-made provision empowering police officers to arrange for the analysis of crime scene samples. Such a provision could be included in any new legislation enacted to replace the CIBS Act.

5.39 The benefit of including a tailor-made provision in a new Act would be that it could describe the crime scene examination process and the associated powers available to police officers in more detail. Such a description could promote greater certainty, but that might come at the expense of accessibility and simplicity.

5.40 One of the major drivers behind the original enactment of the Search and Surveillance Act was to pull together the search powers available to Police in one statute and to simplify them. Placing a central Police search power in a different Act and framing it in specific as opposed to general terms would undermine that goal. For that reason, we consider that our proposed amendments to section 112 of the Search and Surveillance Act would probably be a preferable solution.

The issue of contamination

5.41 Aside from the two relatively technical issues discussed in this chapter, the only other area of concern that we have in respect of crime scene examinations is the increasing risk of contamination. This issue is closely related to developments in the sensitivity of DNA profiling kits and is discussed at length in Chapter 7.

39 *Hamed v R* [2011] NZSC 101, [2012] 2 NZLR 305 at [217] per Tipping J; *Lorigan v R* [2012] NZCA 264, (2012) 25 CRNZ 729 at [26]–[38]; and *R v Gardiner* (1997) 15 CRNZ 131 (CA) at 134.

CHAPTER 6

Forensic DNA phenotyping

INTRODUCTION

6.1 Once a crime scene sample is obtained, the next step in the casework process is for the sample to be analysed by forensic scientists at the Institute of Environmental Science and Research (ESR).

6.2 There are two main choices available to a forensic scientist. One choice is to analyse the sample using traditional STR profiling techniques[1] to generate a crime scene profile that can be compared to another profile – usually from a known person (such as a suspect). This process, called forensic comparison, is the more usual one used in casework. We discuss this in Chapter 7.

6.3 The other choice, in lay terms, is for the forensic scientist to mine the crime scene sample for information about the person who left it at the crime scene.[2] Recent developments in DNA analysis mean that forensic scientists can now use certain analysis techniques to predict some of the likely physical characteristics of the person who left the sample – such as a person's hair colour, eye colour or ethnicity. This is known as forensic DNA phenotyping.

6.4 DNA phenotyping clearly demonstrates the tension in seeking to create a statutory regime that capitalises on developing science whilst being constitutionally sound and with sufficient legal certainty. Managing this tension is the biggest challenge in reforming this area of law.

6.5 This chapter explains what forensic DNA phenotyping is, the law that applies to it and how it has been used in New Zealand to infer ethnicity[3] in certain situations. We then discuss the issues and options for reform.

WHAT IS FORENSIC DNA PHENOTYPING?

6.6 Forensic DNA phenotyping is the process of analysing a person's DNA to predict their likely physical appearance. That prediction can be direct or indirect. A direct prediction is when a person's DNA suggests that they have a particular physical characteristic or trait, such as red hair or blue eyes. An example of an indirect prediction is when a person's

1 STR profiling techniques are discussed in Chapter 3.

2 Note that the term we use in this issues paper to describe both of these processes (analysis of a sample in isolation and forensic comparison), when conducted within the confines of a specific criminal investigation, is "casework".

3 A person's genetic ancestry is what is predicted through DNA phenotyping, rather than "ethnicity" per se. The term "ethnic inferencing" or "ethnicity testing" are the terms widely used in the academic literature as opposed to "ancestry inference". We have opted to use "ethnic inferencing" in this paper.

DNA is suggestive of a particular ethnicity or ancestry. That ethnicity or ancestry may in turn be linked to physical traits, such as skin colour.

6.7 At present, there are three types of forensic DNA analysis kit that are commercially available and can be used for forensic DNA phenotyping. Some of the kits target physical characteristics such as hair and eye colour (referred to as externally visible characteristics or EVCs). Some target certain genetic markers in order to predict a person's likely ancestry or ethnicity. The kits are as follows:

(a) Analysis kits that target specific SNPs or Y-STRs[4] that are ancestry informative markers (AIMs).[5] These kits can be used to predict a person's likely genetic ancestry, which in New Zealand and elsewhere is usually described as "ethnic inferencing". We explain how this is done by the ESR below.[6]

(b) Analysis kits that target SNPs associated with EVCs. These kits can be used to predict likely eye, skin and/or hair colour.[7] We are not aware of any cases in New Zealand where ESR has analysed a crime scene sample to predict an EVC. It is possible that it may be used in casework within one or two years.[8]

(c) Analysis kits that target mitochondria (MtDNA). MtDNA consists of around 16,000 base pairs and is inherited maternally so it will be the same for a mother and all her biological children. These kits can be used to predict a person's ethnicity.[9]

6.8 As well as the forensic DNA phenotyping kits on the market, additional kits are currently being scientifically validated prior to commercial sale. These kits predict other physical traits including height, age, build and facial structure.[10] Ultimately, these kits could be used to produce an identikit-style picture of a potential suspect.[11]

6.9 Like the other supplementary DNA analysis techniques discussed in Chapter 3, forensic DNA phenotyping has emerged in response to a policing need. In some investigations, police officers do not have any suspects and there is no match between the crime scene profile and any profiles on the databanks. Even if a DNA profile can be generated from a crime scene sample, there is no guarantee that any forensic comparison process will result in a match. In that situation, forensic DNA phenotyping has the potential to provide a lead in an investigation that would otherwise have stalled. Forensic DNA phenotyping could also be useful where police officers have a pool of potential suspects that they would like to narrow down before approaching any individual for direct suspect sampling.[12]

4 Note that while Y-STR kits can be used for ethnic inferencing, that is not the primary purpose of these kits.

5 See the explanations of SNPs, Y-STR profiling and AIMs in Chapter 3.

6 At [6.12] to [6.13].

7 See the explanation of EVCs in Chapter 3.

8 See Table 2 in Chapter 3 for further information.

9 See Table 2 in Chapter 3 for further information on this type of analysis kit.

10 Peter Gunn, Simon Walsh and Claude Roux "The nucleic acid revolution continues: will forensic biology become molecular biology?" (2014) 5 Front Genet 44 at 3; and "Genes for face shape identified" *The BBC* (online ed, London, 13 September 2012).

11 Donna Chisholm "Can a genetic test help you stay healthy and live longer?" *North and South Magazine* (online ed, Auckland, 7 August 2017).

12 Aside from criminal investigations, phenotyping can also be used to assist in missing person and disaster victim identification cases.

6.10 Significantly, forensic DNA phenotyping is a purely investigative tool. The results would not ordinarily be presented as evidence in court.[13] There are two main reasons for this. First, it can only predict a person's likely appearance, so it is not sufficiently reliable to be admitted as evidence. Second, there is no need to rely on the results as evidence. Once a suspect is identified using forensic DNA phenotyping, an investigator can obtain a reference sample from that person (either by consent or compulsion) for comparison to the crime scene sample. If that results in a match, the comparison would be the relevant evidence at any trial. While this provides a check on reliability, it means that forensic DNA phenotyping is not subject to any routine oversight by the courts. To address this, one of the options we put forward at the end of this chapter is for a court or oversight body to pre-approve the use of forensic DNA phenotyping in any particular case.

FORENSIC DNA PHENOTYPING IN NEW ZEALAND

6.11 New Zealand Police and ESR have advised that the only type of forensic DNA phenotyping that has been conducted in New Zealand is ethnic inferencing. It has been used in 11 criminal investigations. We examine these 11 instances further below, but first we explain how ethnic inferencing is conducted by ESR.

6.12 At present, the process used by ESR to make an ethnic inference involves three steps. First, the scientist obtains formal approval from the appropriate senior police officer to undertake the ethnic inference. Second, the scientist generates a Y-STR profile from the crime scene sample, which targets ancestry informative markers (AIMs). As explained in Chapter 3, the Y chromosome passes largely unchanged from one generation to the next, so it is relatively easy to identify related males.[14] Third, the scientist compares the crime scene Y-STR profile to New Zealand and international Y-STR population databanks. (Y-STR population databanks contain anonymised Y-STR profiles from volunteers who have also provided information about their ethnicity. We discuss these in further detail below).

6.13 The aim of comparing the crime scene Y-STR profile to these Y-STR population databanks is for the scientist to identify how many times the exact same Y-STR profile as that obtained from the crime scene sample appears within each population databank. The scientist reports this information back to investigators and offers their opinion as to whether the results are indicative of a particular ethnicity. In reporting back, the scientist reports the findings in terms of a Y-STR likelihood ratio.[15]

13 We understand that ESR's case file is disclosed to defence counsel. This means any forensic DNA phenotyping results could be raised and discussed in court if defence counsel considered that there was a reason to do so.

14 ESR has advised that, to date, the highest likelihood ratio for a matching Y-STR profile in New Zealand is approximately 1:430. This is significantly lower than the likelihood ratios in the millions that are common in relation to traditional STR profiling.

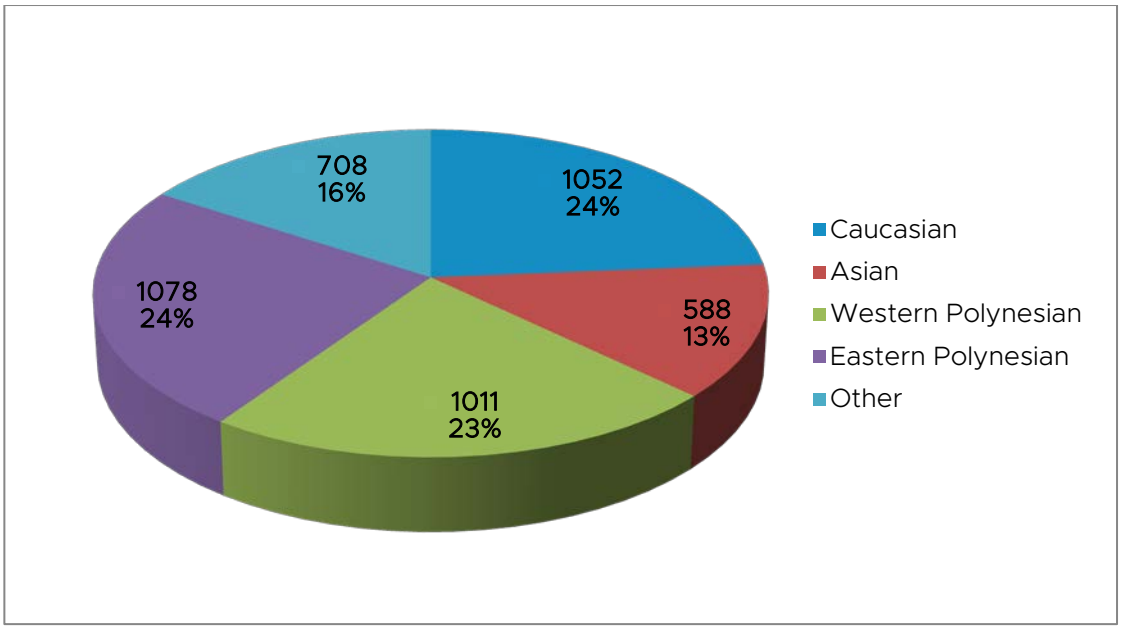
15 An example of a Y-STR likelihood ratio provided by ESR is as follows: "Either a) the male DNA determined from this sample originated from Mr X; or (b) this DNA has originated from a male paternally unrelated to Mr X, selected at random from the New Zealand population and the match has occurred by chance. When considered in this way, the Y-STR profiling evidence is at least one million million ($1x10^{12}$) times more likely if the male DNA determined from the sample originated from Mr X, rather than from another male paternally unrelated to him and selected randomly from the New Zealand population. This finding provides scientific support for the proposition that the male DNA determined from the sample originated from Mr X. It should be noted that paternal male relatives of Mr X may not be excluded by this Y-STR DNA evidence alone."

Y-STR population databanks

6.14 The New Zealand Y-STR population databank was originally created by ESR to assist in generating the likelihood ratios that explain the significance of a match between any two DNA profiles.[16] In order to generate the likelihood ratios, ESR needed to know the frequency of particular STRs within the New Zealand population. It was not possible to simply rely on the international Y-STR population databank for this purpose as it contains too few profiles from the Pacific region.[17] Therefore, ESR created the New Zealand Y-STR population databank.

6.15 The composition of the New Zealand Y-STR population databanks is demonstrated in the pie chart below:[18]

Graph 1: Y-STR population databank as at 30 June 2018



6.16 There is an important issue to signal in relation to New Zealand's Y-STR population databank. At present, the main way of obtaining profiles for this databank is to ask individuals who are required to provide biological samples to Police to also complete a voluntary ethnicity form.[19] While the Y-STR population databank is important for scientific

16 As discussed in Chapter 3, when a scientist presents forensic comparison evidence in court they do so with reference to a likelihood ratio. An example of this is as follows: "*the likelihood of obtaining these [DNA profiling] results is at least one million times greater if the DNA in this sample originated from Person X rather than from someone selected at random from the general New Zealand public. On the verbal equivalent scale this would provide extremely strong support for the proposition that the DNA evidence came from the person of interest*".

17 For instance, in 2010, the international Y-STR population databank consisted of the following main groupings: African (1,166), European (11,273), Arctic (272), Asian (12,666), Latin American (5,493) and North American (3,256). This data was provided to Police by ESR in a 2010 case. For updated information see Y-STR Haplotype Reference Database "Current State of the Database" <https://yhrd.org/>.

18 The data used to create this pie graph was provided by ESR.

19 As the majority of samples are now obtained by Police by way of compulsion for the Temporary Databank (after a person has been charged with an offence), this means most of the voluntary ethnicity forms are also completed by people who have had their sample obtained by compulsion. However, as we explain in Chapter 11, prior to 2010, the most common method of obtaining samples was under Part 3, where samples were provided by consent for the DPD. Therefore, many of the DNA profiles currently on the Y-STR population databank will have been obtained when Police was also obtaining samples by consent (under Part 3) rather than when Police was obtaining samples by compulsion (under Part 2B). See Chapters 8 and 11 for further discussion of the process of Police obtaining samples.

purposes, we have concerns about the content of the form and the timing of the request, which we discuss in Chapter 11.[20]

Police policy on ethnic inferencing

6.17 Police policy is that the use of ethnic inferencing is reserved for serious criminal cases where there are no other investigative leads. Any request to ESR for an ethnic inference must be pre-approved by a Police District Crime Manager. Police is currently finalising a written protocol confirming this policy. It will be similar to the one that is already in place on familial searching.[21] However, even if finalised and publicly available, compliance with the protocol will be a matter of policy as opposed to law.

Eleven instances of ethnic inferencing

6.18 Since 2007, Police has asked ESR to provide an ethnic inference in 11 criminal investigations. In five of those, no ethnic inference was possible, as the results were not sufficiently indicative of a particular ethnicity. Of the remaining six investigations, three are ongoing, one involved the identification of a victim as opposed to a suspect, and in two, ethnic inferencing assisted in the identification of the offender. We now discuss these last two cases in further detail.

The 2010 murder

6.19 The first case involved the fatal stabbing of a taxi driver in 2010. The offender left the knife in the taxi and fled. When an ESR scientist analysed the knife, they found blood from the victim and an unknown male. Scientists generated a DNA profile for the unknown male (the crime scene profile). The crime scene profile did not match any profile on the known person databank. The officer in charge of the investigation made a request to ESR for an ethnic inference. The results indicated that the unknown male was probably Chinese. Meanwhile, police officers had obtained CCTV footage of the offender getting into the taxi. It was difficult to see the offender, but he was wearing a distinctive backpack that was later found in a park. Further investigation revealed the owner of the backpack, who was Chinese. The owner of the backpack had fled overseas, but police officers obtained a search warrant for his apartment and seized two toothbrushes. A forensic comparison revealed a match between a DNA profile from one of the toothbrushes and the crime scene profile. Eventually, this man was arrested, tried and found guilty of the murder.[22]

The 2015 rape

6.20 In 2015, a man broke into a house and raped a woman while she was in bed with her husband. The victim and her husband could not identify the offender. The victim's medical examination kit was analysed by an ESR scientist who found semen from an unknown male. Scientists generated a DNA profile for the unknown male (the crime scene profile). The crime scene profile did not match any profile on the known person

20 In September 2018 ESR recorded that only about 15 per cent of those requested completed a form that was sent with in with their sample.

21 Familial searching is the subject of Chapter 13.

22 See Paul Easton "Slain taxi driver's family fights for the kiwi dream" *Sunday Star Times* (online ed, Auckland, 3 July 2015). See also Simon Morton "Forensics NZ, season 1, episode 1: Operation Edgewater" (aired 24 April 2016).

databank. The officer in charge of the investigation made a request to ESR for an ethnic inference. The results indicated that the unknown male was probably Western Polynesian. In light of that information and fingerprint evidence, police officers asked eight Tongan men who lived near the victim's house to provide reference samples (by consent) for comparison to the crime scene profile. The men were on limited work visas and were due to leave the country. A profile generated from one of the samples matched the crime scene profile. The man who had provided the sample pleaded guilty to the rape.[23]

THE APPLICABLE LAW

6.21 Neither the Search and Surveillance Act nor the CIBS Act places any restrictions around what analysis of a crime scene sample may involve. The process is, however, subject to some restrictions by virtue of the New Zealand Bill of Rights Act 1990 (NZBORA) and the Privacy Act 1993. These restrictions apply to both forensic DNA phenotyping and forensic comparisons.

6.22 First we examine the two restrictions under NZBORA – the right to be free from unreasonable search and seizure under section 21 and the right to be free from discrimination under section 19(1).

Section 21 of NZBORA

6.23 Section 21 of NZBORA protects against unreasonable search and seizure by the State. As we explained in Chapter 2, the act of obtaining a biological sample directly from a suspect is a "search and seizure" for the purposes of section 21. That is because the sampling process is a State intrusion upon that person's reasonable expectations of privacy. The intrusion is two-fold. First, the person's bodily integrity is compromised. Second, there is an intrusion on informational privacy, as a biological sample can be analysed to obtain a vast amount of personal information.

6.24 Importantly, the search and seizure does not end at the moment a police officer takes possession of the sample. That is because seizure is a continuing act.[24] It continues for the entire time that the sample is in the possession of the State. Therefore, the obligation of reasonableness in section 21 of NZBORA applies to both the taking of a biological sample from a suspect and how that sample is dealt with afterwards, including how it is analysed.

Is the act of analysing a crime scene sample part of a search and seizure?

6.25 In our view, there are three main differences between obtaining and analysing a crime scene sample and obtaining and analysing a suspect sample. These differences may mean that obtaining and analysing a crime scene sample is not part of a search and seizure.

23 Lauren Moriarty and Turlough Thomas Stone "Case study: Ethnicity testing for intelligence purposes" (paper presented to the 23rd Australian and New Zealand Forensic Science Society Symposium, Auckland, 20 September 2016).

24 A seizure is not just the initial act of the State taking control of a thing. It extends to the situation after the thing is taken into custody and for so long as that state or situation continues: *Alwen Industries v Comptroller of Customs* (1993) 1 HRNZ 574 (HC) at 586.

6.26 First, crime scene sampling does not involve an intrusion on bodily integrity. Advances in technology mean that it is increasingly possible to minimise the physical intrusion inherent in direct sampling,[25] so this distinction may not be as significant as it initially appears. What is more concerning, as it is with suspect sampling, is the increasing amount of personal information that can now be generated from a crime scene sample.

6.27 Second, investigators may not know who is responsible for a crime scene sample, but it is hard to see how a police officer's lack of knowledge impacts upon the other person's expectations of privacy.

6.28 Third, and most significantly, crime scene samples are found at crime scenes. This third difference raises the question: Does a person still have a reasonable expectation of privacy in the information that could be derived from their DNA if they leave a biological sample at a crime scene? We think that the answer is yes.

6.29 The point can be illustrated by considering an innocent bystander who has a drink at a bar and then leaves before a fight breaks out. Despite leaving a biological sample on a bottle at the crime scene, the person is still likely to consider that the information contained in their DNA is private. It could be argued that the person's expectation of privacy would not be objectively reasonable if they were aware of, or committed, an offence. But this argument suggests that section 21 of NZBORA only protects innocent third parties. That is not the case. Section 21 protects all people from unreasonable search and seizure by the State. Whether or not a person has committed an offence, they are protected from unreasonable State action.

What analysis would be unreasonable?

6.30 Section 21 of NZBORA only provides protection from an unreasonable search and seizure. Case law suggests that, as long as the analysis of a crime scene sample in any given case is proportionate and minimally intrusive, there will be no issue in terms of section 21.[26]

6.31 In relation to crime scene samples, a central consideration in applying the principle of proportionality is that, by definition, a crime scene sample is closely connected to the offence under investigation. This means that the law enforcement interest in analysis may be such that a substantial intrusion on informational privacy is justified. However, investigators still need to undertake this assessment, weighing the gravity of the offence against the potential probative value of the analysis results. This is highly case-specific and suggests that blanket policies in this area may be problematic.

6.32 When it comes to the principle of minimal intrusion, it is useful to draw an analogy to the forensic examination of computers. In that context the courts afford considerable leeway to forensic examiners to decide what examination is necessary and how to conduct the examination, as long as steps are taken to avoid viewing irrelevant or privileged material.[27] In short, not all of the potentially available information on a computer is fair game.

6.33 The analogy suggests that some of the information that could be derived from a crime scene sample is likely to be off limits to investigators under NZBORA.

25 See Chapter 8 for further discussion on this.

26 We introduced the principles of proportionality and minimal intrusion in Chapter 2.

27 Law Commission *Review of the Search and Surveillance Act 2012: Ko te Arotake I te Search and Surveillance Act 2012* (NZLC R141, 2017) at ch 12.

6.34 A prime example of is genetic disorders. Due to developments in health science, it would be entirely possible for a scientist to analyse a crime scene sample to look for a genetic disorder.[28] This information could be used by an investigator to assist in identifying a suspect, but those actions would amount to a substantial intrusion on the suspect's informational privacy, particularly if a disorder were found of which the person had been unaware. Analysing the crime scene sample in this way would undermine the fundamental concept of informed consent upon which genetic testing in the health sector operates. Furthermore, if the information about the disorder were shared with the suspect, this would undermine the right of that person not to know about their health issue.[29] It is hard to imagine a case in which such a significant intrusion on privacy would be proportionate, necessary and minimally intrusive.

Police's ethnic inferencing policy and section 21 of NZBORA

6.35 We consider that Police's policy on ethnic inferencing reflects the requirements of section 21 of NZBORA. Limiting its use to serious cases where there are no other leads recognises that ethnic inferencing involves a reasonably significant intrusion on privacy and that the intrusion can only be justified, in any given case, if it is considered necessary to progress the investigation. Relaxation of that policy might result in a breach of section 21.

Is ethnic inferencing discrimination under section 19(1) of NZBORA?

6.36 A specific legal issue arises in relation to ethnic inferencing that does not arise in relation to other forms of forensic DNA phenotyping (or forensic comparisons). That is the question of whether ethnic inferencing could be an unjustified limitation on the right to be free from discrimination on the grounds of race or ethnic origin under section 19(1) of NZBORA.[30]

6.37 For an act or omission to amount to discrimination under section 19(1) of NZBORA:[31]

(a) It must involve differential treatment, in that it creates a distinction (in the sense of treating a group of people differently from a comparator group) based on a prohibited ground;

(b) the distinction must cause a material disadvantage; and

(c) if there is a limitation on the right to be free from discrimination, by virtue of section 5 of NZBORA, it must be "demonstrably justified in a free and democratic society" and "prescribed by law".

28 Debra Wilson *Genetics, Crime and Justice* (Edward Elgar Publishing, Cheltenham (UK), 2015) at [3.7.2.7].

29 Universal Declaration on the Human Genome and Human Rights (UNESCO Res 29C/17), art 5. See also the discussion in Nuffield Council on Bioethics *The forensic use of bioinformation; ethical issues* (September 2007) at Appendix 4.

30 We examine the right to be free from discrimination as protected by sections 5 and 19 of NZBORA in Chapter 13, which discusses familial searching. Familial searching is used more frequently in New Zealand than ethnic inferencing - it has been used in 93 cases. We think that the risk of unjustified discrimination is much higher in respect of familial searching than with ethnic inferencing.

31 This test comes from the leading case on section 19 of the New Zealand Bill of Rights Act 1990: *Ministry of Health v Atkinson* [2012] NZCA 184, [2012] 3 NZLR 456 at [55].

Differential treatment

6.38 In terms of the science of ethnic inferencing, no ethnic or racial group is treated differently by the analysis process, but there may be a distinction in practice. That is because ethnic inferencing would be of most use to Police in cases where the identified ethnicity is rare in the geographic area of interest to Police - and therefore a manageable number for police officers to identify and approach.

6.39 By way of example, if a crime occurred in the small North Island town of Ohura and ethnic inferencing indicated that the crime scene sample probably came from a Latin American male, any Latin American men in the town would probably be spoken to by investigators and might be treated as potential suspects. In the same case, however, if the result was a male of European origin, the information probably would not lead to any further immediate police inquiries.

6.40 The two comparator groups are ethnic and racial groups that have very few members in the particular geographic area (the first group) and the remainder of the population (the second group).[32] Ethnic inferencing could result in indirect differential treatment between these two groups. A person in the first group is more likely to be investigated for a crime they did not commit, on the basis of their ethnicity, than a person in the second group.

6.41 None of the 11 ethnic inferencing cases so far in New Zealand has involved an inference of a small minority ethnicity or race in the area of interest.

Material disadvantage

6.42 Whether any differential treatment would cause a material disadvantage to members of small minority ethnic or racial groups in any particular area is questionable. They would be more likely than members of larger racial and ethnic groups in the area to become a potential suspect in an investigation purely because of their race or ethnicity. On the other hand, those individuals would also be more likely to be ruled out of police inquiries for the same reason. Returning to the example above, if the ethnic inferencing result in relation to the crime in Ohura was European, any Latin American who was otherwise of potential interest to Police would probably not be the subject of further inquiries.

6.43 The question of whether ethnic inferencing could cause a material disadvantage in terms of section 19(1) of NZBORA needs to be distinguished from broader ethical concerns around racial profiling and stigmatisation, which could easily affect larger ethnic groups such as Māori and Pacific peoples in a given geographical area, such as in Auckland. These wider social problems could be exacerbated by ethnic inferencing. We consider this significant issue separately at [6.58] to [6.64].

6.44 The required assessment under section 19(1) is whether the potential differential treatment that we have identified above could result in a material disadvantage for any individual. In making that assessment, the focus must be on the direct impact that ethnic

[32] The Court of Appeal reiterated the importance of identifying comparator groups in *Ngaronoa v Attorney-General* [2017] NZCA 351, [2017] 3 NZLR 643. The Court stated at [121]:

> There has been judicial debate in the Commonwealth about the usefulness of a comparator exercise. In the United Kingdom the search for a comparator has been described as an "arid" exercise. We accept that a comparator exercise should not be treated as a formula to determine the answer to an allegation of discrimination. Comparator groups can be overly refined by building into the comparators the contested assumptions, thereby neutralising the comparator exercise. However, since discrimination is, in essence, treating persons in comparable situations differently, it is inevitable that the reasoning involved in such a process will include choosing a person or group for comparison purposes.

inferencing could have on members of rare ethnic and racial groups in any area of interest to Police, as compared to other individuals in the remainder of the population.

Demonstrably justified and prescribed by law

6.45 If ethnic inferencing were found to limit the right to be free from discrimination in some way, the limitation would need to be "demonstrably justified in a free and democratic society" and "prescribed by law" as set out in section 5 of NZBORA. To be "demonstrably justified", the limiting measure needs to be:

(a) for a purpose that is sufficiently important to justify limiting the right;

(b) proportionate;

(c) rationally connected to its purpose; and

(d) no more than is reasonably necessary to achieve that purpose.[33]

6.46 To be "prescribed by law", limits must be identifiable and expressed with sufficient precision in an Act of Parliament, subordinate legislation or the common law. The limits must be neither ad hoc nor arbitrary, and their nature and consequences must be clear, although the consequences need not be foreseeable with absolute certainty.[34]

6.47 When considering how these tests apply to ethnic inferencing, it is necessary to consider Police's current policy. In accordance with that policy, the purpose of ethnic inferencing is to assist in resolving investigations into serious criminal offending. That is an important objective. Limiting the use of ethnic inferencing to serious cases also minimises the likelihood of causing any material disadvantage to members of small minority ethnic or racial groups in particular areas. The chance of identifying a small minority ethnicity is even lower if ethnic inferencing is hardly ever used. Further, there does appear to be a rational connection between ethnic inferencing and resolving criminal investigations. However, we have some concerns about the overall effectiveness of ethnic inferencing, which we discuss at [6.71] to [6.75].

6.48 Even if the limiting measure is justified, it still needs to be prescribed by law. A publicly available Police protocol may be sufficient to meet this definition – but only if the protocol relates to the exercise of a discretionary statutory power. The act of analysing a crime scene sample is undertaken as part of the exercise of general police search powers in the Search and Surveillance Act.[35] Therefore, if the ethnic inferencing protocol were finalised and made publicly available, we consider that it would probably fulfil this requirement.

The information privacy principles in the Privacy Act

6.49 Whether the Privacy Act applies to the analysis of crime scene samples depends on whether the samples could be described as containing "personal information".[36]

33 *R v Hansen* [2007] NZSC 7, [2007] 3 NZLR 1 at [104]. See detailed discussion of the case law in the section 19(1) analysis of familial searching in Chapter 13.

34 *New Health New Zealand Incorporated v South Taranaki District Council* [2018] NZSC 59 at [107].

35 See Chapter 5 and in particular the discussion of section 112 of the Search and Surveillance Act 2012, which enables police officers to send crime scene samples to ESR for analysis.

36 In a recent guidance document – Office of the Australian Information Commissioner *What is Personal Information?* (May 2017) – the Australian Information Commissioner explained:

> Personal information can be in any format – it is not limited to information that is contained in records. The definition expressly states that information is personal information 'whether the information or opinion is recorded in a material form or not'... For example, some

6.50 Personal information is defined in the Privacy Act as "information about an identifiable person".[37] There has been judicial and academic debate on exactly what "identifiable" means in the context of this definition.[38] Some have argued that the person must be able to recognise themselves on the face of the information.[39] On this definition, a crime scene sample probably would not qualify. However, in a 2015 decision, the Court of Appeal in the United Kingdom found that identifiability hinges on whether a person can be individually distinguished from a group. It does not matter that the person's name is not attached to the information, nor does it matter whether the person can recognise themselves in the information.[40] In summary, the information is "identifiable" if it can be used alongside other information to identify the person.[41]

6.51 Were the approach of United Kingdom Court of Appeal followed by New Zealand courts, information derived from a crime scene sample would amount to "personal information", as the sole reason for generating the information is to identify the person responsible for the sample. This would also mean that the information privacy principles in the Privacy Act would apply. Some of these principles have in-built exceptions for law enforcement purposes. However, others do not, including:

- Principle 1: only collect the information that is necessary for a particular purpose; and
- Principle 4: only collect personal information by means that, in the circumstances of the case, do not intrude to an unreasonable extent upon the personal affairs of the individual concerned.

6.52 On this definition, the information privacy principles would require that forensic DNA phenotyping was only undertaken in cases where necessary and in a minimally intrusive way. This is similar to the principles underlying section 21 of NZBORA of proportionality and minimal intrusion. Again, Police's current policy on ethnic inferencing seems to comply with these requirements.

Summary – is ethnic inferencing restricted by the current law?

6.53 NZBORA and the Privacy Act place legal restrictions on the way in which a crime scene sample can be analysed. Those restrictions recognise the importance of informational privacy and the right of individuals to be free from unjustified discrimination.

6.54 From our analysis, it appears that Police's policy on ethnic inferencing reflects these statutory constraints. However, as we discuss below, we consider that there are additional legal and ethical issues that arise in relation to forensic DNA phenotyping.

personal information does not contain any words at all, such as images (especially photos) and sounds (voice or tape recordings) — or can be latent in a material item (for example, DNA in human tissue).

37 Privacy Act 1993, s 2 definition of "personal information".

38 See for example: *A v G* (1999) 5 HRNZ 598 (CRT) at 605–606; *C v ASB Bank Ltd* (1997) 4 HRNZ 306 (CRT) at 308; and *Harder v Proceedings Commissioner* [2000] 3 NZLR 80 (CA) at [49].

39 Katrine Evans "Personal Information in New Zealand: Between a Rock and a Hard Place" (paper presented to Interpreting Privacy Principles: Chaos or Consistency Symposium, Sydney, May 2006).

40 *Vidal-Hall v Google, Inc* [2015] EWCA Civ 311, [2015] 3 WLR 409. This case related to a cookie that Google placed on devices that run Safari. The cookie allowed Google to collect browser-generated information that was then fed to their Double-Click service. Double-Click delivered advertising to consumers based on their online behaviour and apparent preferences. Three claimants filed proceedings against Google under the UK Data Protection Act. See the discussion of the case in K Evans "Pressures on Personal Information: The Ever-changing Field of Privacy" (paper presented to the New Zealand Law Society CPD Top-Up Day Conference, 20 March 2017) 79 at 82–83.

41 Paul Roth "What is 'Personal Information'?" (2000) 20 NZULR 40 at 41–42, and n 4.

ADDITIONAL LEGAL AND ETHICAL ISSUES WITH FORENSIC DNA PHENOTYPING

6.55 The use of forensic DNA phenotyping is considered controversial internationally.[42] There is extensive academic literature as well as government reports on this topic, from which we have identified four main issues:

(a) Intrusion on informational privacy.

(b) The risk that DNA phenotyping may result in racial profiling and stigmatisation.

(c) The absence of a public mandate for forensic DNA phenotyping.

(d) The limited accuracy and utility of forensic DNA phenotyping.

Intrusion on informational privacy

6.56 We have discussed the intrusion on informational privacy with reference to section 21 of NZBORA and the Privacy Act above.

6.57 Some international commentators have expressed concern that, due to growing academic interest in genetic predispositions towards anti-social or violent behaviour, this information may also be included in forensic DNA phenotyping kits in the future.[43] This possibility suggests that there may need to be greater legal certainty around the types of analysis that society does or does not consider acceptable.

Racial profiling and stigmatisation

6.58 There is significant debate as to whether forensic DNA phenotyping may lead to racial profiling and stigmatisation. This is closely related to our discussion of discrimination above. Discrimination, however, is concerned with the effect of forensic DNA phenotyping at an individual level. The wider debate centres around the potential collective impact on groups. This includes ethnic groups of any size, not just rare ones.

6.59 There is a fear among many ethicists and scientists that the use of ancestry informative markers (AIMs) and evidentially visible characteristics (EVCs) in criminal casework could aggravate existing biases and erode social cohesion.[44] They argue that AIMs are

42 National DNA Database Ethics Group (UK) *Ethical Dimensions of Next Generation Sequencing – Stakeholder Consultation* (March 2017); Robin Williams and Matthias Wienroth *Ethical, Social and Policy Aspects of Forensic Genetics: A Systematic Review* (Northumbria University Centre for Forensic Science, 15 May 2014); United Kingdom Human Genetics Commission *Nothing to hide, nothing to fear? Balancing individual rights and the public interest in the governance and use of the National DNA Database* (November 2009); Nuffield Council on Bioethics *The forensic use of bioinformation; ethical issues* (September 2007); Sophie Rushton *Familial Searching and Predictive DNA Testing for Forensic Purposes: A Review of Laws and Practices* (Australia New Zealand Policing Advisory Agency, July 2010); Debra Wilson *Genetics, Crime and Justice* (Edward Elgar Publishing, Cheltenham (UK), 2015); Marcus Smith and Monique Mann *Recent Developments in DNA Evidence* (Australian Institute of Criminology, Trends and Issues in Crime and Criminal Justice no 506, November 2015); Jennifer K Wagner "DNA, Racial Disparities, and Biases in Criminal Justice: Searching for Solutions" (2017) 27 Alb LJ Sci and Tech 95; Victor Toom and others "Approaching ethical, legal and social issues of emerging forensic DNA phenotyping (FDP) technologies comprehensively: Reply to 'Forensic DNA Phenotyping: Predicting human appearance from crime scene material for investigative purposes' by Manfred Kayser" (2016) 22 Forensic Sci Int Genet e1; and Manfred Kayser "Forensic DNA Phenotyping: Predicting human appearance from crime scene material for investigative purposes" (2015) 18 Forensic Sci Int Genet 33.

43 Robin Williams and Matthias Wienroth *Ethical, Social and Policy Aspects of Forensic Genetics: A Systematic Review* (Northumbria University Centre for Forensic Science, 15 May 2014) at 46; and Marcus Smith and Monique Mann *Recent Developments in DNA Evidence* (Australian Institute of Criminology, Trends and Issues in Crime and Criminal Justice no 506, November 2015) at 3.

44 National DNA Database Ethics Group (UK) *Ethical Dimensions of Next Generation Sequencing – Stakeholder Consultation* (March 2017) at 6; Robin Williams and Matthias Wienroth *Ethical, Social and Policy Aspects of Forensic Genetics: A Systematic Review* (Northumbria University Centre for Forensic Science, 15 May 2014) at 44; United

unavoidably linked to prior social assumptions and group categorisations that are steeped in controversy. Given that ethnicity is a social construct, it seems like an uncomfortable fit for scientists to be promoting the use of AIMs in criminal casework.[45] Arguably, the use of EVCs is also an uncomfortable fit, given that skin colour, build and facial structure are all traits that are likely to be targeted and that are already associated with different ethnicities.

6.60 Ethicists argue that the use of EVCs and AIMs may result in the public interpreting ethnicity and criminality as being intrinsically and unavoidably linked, thereby inflaming stereotypes.[46]

Impact on Māori

6.61 This prospect is particularly concerning in New Zealand given the current reality that Māori are disproportionally represented in the criminal justice system.[47] The Commissioner of Police has acknowledged that there is unconscious bias against Māori in policing,[48] and numerous initiatives are currently under way to address that.[49] A 2017 Court of Appeal decision also highlighted the real danger of unconscious racial bias in criminal investigations.[50] The risk of exacerbating these issues should not be taken lightly.

6.62 Another layer to this is the potential of damaging relationships both within and between ethnic groups. Forensic DNA phenotyping identifies groups of people based on shared characteristics: their ethnicity or their appearance. These people may well be related. If there is a cloud of suspicion over a group of related people due to the actions of one member or due to a misleading forensic DNA phenotyping result,[51] the relationships within that group could be detrimentally affected. Internationally, this has been recognised as an ethical concern,[52] and in New Zealand, there is an additional concern that forensic DNA phenotyping may be inconsistent with tikanga Māori.

Kingdom Human Genetics Commission *Nothing to hide, nothing to fear? Balancing individual rights and the public interest in the governance and use of the National DNA Database* (November 2009) at [5.13]–[5.14]; Nuffield Council on Bioethics *The forensic use of bioinformation; ethical issues* (September 2007) at [6.21]–[6.15]; and Sophie Rushton *Familial Searching and Predictive DNA Testing for Forensic Purposes: A Review of Laws and Practices* (Australia New Zealand Policing Advisory Agency, July 2010) at 29–30.

45 Robin Williams and Matthias Wienroth *Ethical, Social and Policy Aspects of Forensic Genetics: A Systematic Review* (Northumbria University Centre for Forensic Science, 15 May 2014) at 44–47.

46 Sophie Rushton *Familial Searching and Predictive DNA Testing for Forensic Purposes: A Review of Laws and Practices* (Australia New Zealand Policing Advisory Agency, July 2010) at 29; National DNA Database Ethics Group (UK) *Ethical Dimensions of Next Generation Sequencing – Stakeholder Consultation* (March 2017) at 9; Nuffield Council on Bioethics *The forensic use of bioinformation; ethical issues* (September 2007) at 81.

47 Discussed in Chapter 2.

48 Interview with Mike Bush, Commissioner of Police (Lisa Owen, The Nation, 28 November 2015) transcript provided by Scoop Independent News (Wellington). See also Nicholas Jones "Police Commissioner: Racial profiling perception 'concern we need to address'" *The New Zealand Herald* (online ed, Auckland, 8 June 2018).

49 Reducing Māori reoffending rates and building Māori confidence and trust in Police are currently important goals for Police. See New Zealand Police and the Māori Focus Forum *The Turning of the Tide: A Whānau Ora Crime and Crash Prevention Strategy 2012-2013–2017-2018* (December 2012); and New Zealand Police *Four Year Plan 2016-2017–2019-2020* (May 2016). Commitment to Māori and the Treaty is one of Police's seven core values: New Zealand Police *Annual Report 2016-2017* (November 2017) at 9.

50 *Kearns v R* [2017] NZCA 51, [2017] 2 NZLR 835 at [24]–[26], [38] and [39].

51 The result could be misleading for numerous reasons including if the result did not reflect how the person's genes were expressed (for example, the prediction may be green eyes but the person's eyes may in fact be blue), if the person had altered their appearance or if the person's presence at the crime scene was entirely innocent.

52 Robin Williams and Matthias Wienroth *Ethical, Social and Policy Aspects of Forensic Genetics: A Systematic Review* (Northumbria University Centre for Forensic Science, 15 May 2014) at 52; United Kingdom Human Genetics Commission

6.63 Regular use of ethnic inferencing could also undermine whanaungatanga and the maintenance of relationships of central importance in tikanga Māori.[53] That is because the actions of one potentially unknown member of the group could bring the entire group under Police suspicion. The damage to any ethnic group that places considerable emphasis on the family and wider kin relationships could be significant.

6.64 For that reason, we consider that wide public consultation is necessary to determine the appropriate use of forensic DNA phenotyping in New Zealand. This would need to include a central role for Māori in a way that recognises the principles of rangatiratanga, partnership and equity under the Treaty of Waitangi. Those principles would also require Māori to have an active role in development of policies governing use and oversight if forensic DNA phenotyping were ultimately permitted.

Could forensic DNA phenotyping promote social cohesion?

6.65 In determining whether forensic DNA phenotyping should be permissible at all, it is however necessary to take into account the counter-arguments that have been raised, which suggest that this technique could promote, rather than undermine, social cohesion. Some academics argue that the analysis of AIMs and EVCs could be used to challenge racial bias.[54] The prime example given in support of this argument is that, if a police officer was concerned that an eyewitness's evidence might be tainted by racial bias, the officer could obtain an ethnic inference as an independent check on the witness's account. It is widely recognised that eyewitness identification evidence is often unreliable, so use of this technique could be beneficial.[55]

6.66 An early ethnic inferencing case from 1999 in the Netherlands provides a real-life example of forensic DNA phenotyping being used in that way. In that case, a 16-year-old girl was murdered and the inhabitants of the town where it occurred widely believed that an asylum seeker was involved. Forensic DNA phenotyping suggested otherwise and assisted in alleviating the racial tension in the town.[56]

Nothing to hide, nothing to fear? Balancing individual rights and the public interest in the governance and use of the National DNA Database (November 2009) at 56; Sophie Rushton *Familial Searching and Predictive DNA Testing for Forensic Purposes: A Review of Laws and Practices* (Australia New Zealand Policing Advisory Agency, July 2010) at 29.

53 See discussion in Chapter 2; See also Hirini Moko Mead *Tikanga Māori: Living by Māori Values* (Huia Publishers, Wellington, 2003) at 28–29; Māmari Stephens "Fires Still Burning? Māori Jurisprudence and Human Rights Protection in Aotearoa New Zealand" in Kris Gledhill, Margaret Bedggood and Ian McIntosh (eds) *International Human Rights Law in Aotearoa New Zealand* (Thomson Reuters, Wellington, 2017) 99 at [3.3.02].

54 Particularly Jennifer K Wagner "DNA, Racial Disparities, and Biases in Criminal Justice: Searching for Solutions" (2017) 27 Alb LJ Sci and Tech 95. See also Debra Wilson *Genetics, Crime and Justice* (Edward Elgar Publishing, Cheltenham (UK), 2015) at 64–65.

55 Empirical studies suggest that attempts to identify someone of a different racial appearance are generally less accurate than attempts to identify someone of the same racial appearance (a phenomenon known as "own-race bias" or the "cross-race effect"). There is a substantial scientific literature on this phenomenon. See Brian Cutler and Steven Penrod *Mistaken Identification: The Eyewitness, Psychology, and the Law* (Cambridge University Press, New York, 1995) at 104; Christian Meissner and John Brigham "Thirty Years of Investigating the Own-Race Bias in Memory for Faces: A Meta-Analytic Review" (2001) 7 Pyschol Pub Pol and L 3 at 4–5, and 21–27; Luke Jackiw and others "Examining the Cross-Race Effect in Lineup Identification Using Caucasian and First Nations Samples" (2008) 40 Can J Behav Sci 52 at 56; United States Research Council and others *Identifying the Culprit: Assessing Eyewitness Identification* (The National Academies Press, Washington DC, 2014) at 96–97; and Steven Young and others "Perception and Motivation in Face Recognition: A Critical Review of Theories of the Cross-Race Effect" (2012) 16 PSPR 116 as cited in Andrew Roberts "Probative Value, Reliability and Rationality" in Andrew Roberts and Jeremy Gans (eds) *Critical Perspectives on the Uniform Evidence Law* (The Federation Press, Sydney, 2017) 63 at 69. See also Law Commission *Second Review of the Evidence Act 2006: Te Arotake Tuarua I te Evidence Act 2006* (NZLC IP42, 2018) at [8.1].

56 Debra Wilson *Genetics, Crime and Justice* (Edward Elgar Publishing, Cheltenham (UK), 2015) at [3.7.3.3].

6.67 We note that use of forensic DNA phenotyping may not be consistent with Police's current policy of reserving ethnic inferencing for cases where there are no other leads.

The absence of a public mandate for DNA phenotyping

6.68 The international literature highlights that forensic DNA phenotyping is not in keeping with the original public mandate that was given for the use of DNA profiling in criminal investigations worldwide. As explained in Chapter 3, traditional STR profiling and DNA profile databanks were originally accepted by Parliaments around the world on the basis that DNA profiles would only be generated from "junk" DNA.[57] Politicians stressed to the public that this meant that DNA profiles would not reveal any information about physical traits, disorders or dispositions.[58] Similar statements were made by New Zealand politicians when the CIBS Act came into force and when it was subsequently amended.[59] Given that forensic DNA phenotyping engages NZBORA and involves a substantial deviation from that original policy, we consider that Parliament needs to make a specific decision about whether it should be used and, if so, in what circumstances.[60]

6.69 There are three reasons we think this is a decision for Parliament. First, as discussed in this chapter, forensic DNA phenotyping raises significant legal and ethical issues. Second, forensic DNA phenotyping deviates from the original policy underlying the CIBS Act, as it analyses crime scene samples in isolation and targets coding regions of the genome. Third, forensic DNA phenotyping is only ever used for investigative purposes. This means that, unlike most other DNA analysis techniques, there is no court oversight in the form of rulings around the admissibility of evidence at trial.

6.70 We discuss possible options later in this chapter.

DNA phenotyping is of limited accuracy and utility

6.71 There are widespread concerns around the accuracy and utility of forensic DNA phenotyping. The kits that are currently on the market can predict particular EVCs and AIMs with a degree of estimated accuracy that ranges from 48 per cent to 94 per cent, depending on the ethnicity or trait in question.[61] These figures may improve, but it is unlikely that they will ever reach 100 per cent due to the complexities of genetics and global migration,[62] nor may there be any visible connection between a person's genotype (their genes) and how they appear. Contact lenses, hair dye and tanning products are widely used to change eye, hair and skin colour. A person's skin colour, appearance and the ethnicity with which they identify may not reflect their AIMs.

57 The loci in STR profiling kits were specifically chosen because they were in non-coding regions of the genome: Chapter 3. See also Nuffield Council on Bioethics *The forensic use of bioinformation; ethical issues* (September 2007) at Appendix 4.

58 Sophie Rushton *Familial Searching and Predictive DNA Testing for Forensic Purposes: A Review of Laws and Practices* (Australia New Zealand Policing Advisory Agency, July 2010) at 30; Robin Williams and Matthias Wienroth *Ethical, Social and Policy Aspects of Forensic Genetics: A Systematic Review* (Northumbria University Centre for Forensic Science, 15 May 2014) at 41; and Nuffield Council on Bioethics *The forensic use of bioinformation; ethical issues* (September 2007) at Appendices 5 and 6.

59 Discussed in Chapter 4.

60 Legislation Design and Advisory Committee *Legislation Guidelines* (March 2018) at 65–67 state that matters significantly affecting fundamental human rights should be addressed in primary legislation.

61 Debra Wilson *Genetics, Crime and Justice* (Edward Elgar Publishing, Cheltenham (UK), 2015) at [3.7.2.2]–[3.7.2.4].

62 The Forensics Library "DNA analysis" (22 August 2017) About Forensics UK <http://aboutforensics.co.uk/>; and Nuffield Council on Bioethics *The forensic use of bioinformation; ethical issues* (September 2007) at [2.17].

6.72 A common argument in support of forensic DNA phenotyping is that it is no different to eyewitness identification evidence, but for the reasons we have just explained, it is often a less reliable indicator of a person's actual physical appearance.

6.73 Some of the concerns around accuracy may be alleviated by the fact that forensic DNA phenotyping is only an investigative tool. Any investigative lead that results in the identification of a suspect can be verified by a direct forensic comparison between a sample from the suspect and the crime scene sample. However, this does not address the risk that, if police officers do not understand the practical limitations of forensic DNA phenotyping, they may exclude offenders from their investigations too soon. To avoid that outcome, there needs to be clear understanding and good communication between scientists and police officers about the possibility of misleading results.

6.74 There is also a question of the utility of investigative leads generated from forensic DNA phenotyping, even if they are accurate.

6.75 This is demonstrated by the 11 New Zealand cases reviewed earlier in this chapter. Even in the two cases where the ethnic inference appears to have been the most helpful, it was unlikely to have been essential to resolving the case. In the 2010 murder, other evidence led to police officers identifying the offender. The significance of the ethnic inference was that it confirmed the direction of the investigation. In the 2015 rape, the men seem to have been identified as suspects by fingerprint evidence as well the ethnic inference.[63] Further, when they were approached by police officers, the men provided fingerprints and reference samples by consent. Eleven cases is not a very large sample size, but the results do suggest that ethnic inferencing is currently of limited utility and should be closely monitored.

APPROACHES TAKEN OVERSEAS

6.76 Given the controversy surrounding forensic DNA phenotyping, overseas jurisdictions have adopted a conservative approach to its use in criminal casework.[64] The Netherlands is the only country that we are aware of having passed legislation expressly permitting it. The Dutch Code of Criminal Procedure restricts forensic DNA phenotyping to traits that have been pre-approved by Governmental Decree, and these must be externally observable.[65] At present, the only traits that meet both requirements are race (as

63 Lauren Moriarty and Turlough Thomas Stone "Case study: Ethnicity testing for intelligence purposes" (paper presented to the 23rd Australian and New Zealand Forensic Science Society Symposium, Auckland, 20 September 2016).

64 See the cross-jurisdictional summaries in Debra Wilson *Genetics, Crime and Justice* (Edward Elgar Publishing, Cheltenham (UK), 2015) at [3.7.2.8]; Marcus Smith and Monique Mann *Recent Developments in DNA Evidence* (Australian Institute of Criminology, Trends and Issues in Crime and Criminal Justice no 506, November 2015) at 3; and Sophie Rushton *Familial Searching and Predictive DNA Testing for Forensic Purposes: A Review of Laws and Practices* (Australia New Zealand Policing Advisory Agency, July 2010) at 31–33.

65 Criminal Procedure Code (The Netherlands) 2012, s 151d, which states:

> 1. The public prosecutor may, in the interest of the investigation, order DNA testing aimed at establishing externally observable personal characteristics of the unknown suspect or the unknown victim to be conducted. Section 151a(2) shall apply mutatis mutandis.
>
> 2. The DNA testing may only be aimed at establishing the sex, race or other externally observable personal characteristics designated by Governmental Decree.
>
> 3. The proposal for a Governmental Decree to be enacted pursuant to subsection (2) shall not be made any earlier than four weeks after the draft Governmental Decree has been submitted to both chambers of the States General.
>
> 4. The DNA testing may be ordered only in the case of suspicion of a serious offence as defined in section 67(1).
>
> 5. Further rules pertaining to the manner of conduct of the DNA testing may be set by Governmental Decree.

identified through AIMs) and sex. Its use is also limited to investigations into "serious offences".[66]

6.77 In Germany, Belgium and three States in the United States, the use of forensic DNA phenotyping has been banned. There is also a ban in the European Union on member States sharing investigative information that is known to be associated with any hereditary characteristics.[67] In many jurisdictions, however, including Canada, the United Kingdom and Australia, forensic DNA phenotyping is unregulated by statute. If it is used, it is reserved for particularly serious cases.[68] This mirrors the current position in New Zealand.

OPTIONS FOR REFORM

6.78 In this chapter, we have identified the law and policies that apply to forensic DNA phenotyping in New Zealand. They are not particularly accessible. It is not immediately apparent that NZBORA and the Privacy Act are engaged, although we consider that they may be. Consideration also needs to be given to the potential Treaty of Waitangi and tikanga implications of reform options.

6.79 In addition, Police's policy on ethnic inferencing is not yet the subject of a formal and publicly available governing protocol. There is room for improvement in terms of accessibility and legal certainty.

6.80 As we noted above, we consider that it is up to Parliament (as opposed to any other public body) to make an explicit decision as to whether to prohibit or permit forensic DNA phenotyping. This decision should be made in consultation with Māori and other affected groups.

6.81 We suggest there are two broad options for reform that Parliament could consider: a complete ban on forensic DNA phenotyping or a permissive statutory regime.

6.82 A complete ban may not be appropriate, as it would remove an investigative tool from Police that could be valuable in some circumstances. As discussed throughout this chapter, forensic DNA phenotyping has the potential to assist police officers in identifying suspects, narrowing down pools of ethnically or physically diverse suspects; and verifying questionable eyewitness evidence.

6.83 Our preliminary view is that the better approach is to develop a permissive, but conservative, statutory regime. By conservative, we mean that forensic DNA phenotyping should remain reserved for use in investigations into serious offending where there is a case-specific need to resort to use of this technique. This approach reflects the principles of proportionality, necessity and minimal intrusiveness protected by NZBORA and the Privacy Act. Limiting the use of forensic DNA phenotyping to a small number of cases also minimises the risk of damage to social cohesion and compromising duties of whanaungatanga.

66 Section 67(1) of the Criminal Procedure Code 2012 (The Netherlands) defines a serious offence as an offence "which carries a statutory term of at least four years" and provides a list of additional offences that would qualify.

67 European Council Resolution of 25 June 2001 on the exchange of DNA analysis results (2001/C 187/01). This provision is repeated in European Council Resolution of 30 November 2009 on the exchange of DNA analysis results (2009/C 296/01).

68 Jessica Gabel Cino "Tackling technical debt: Managing advances in DNA technology that outpace the evolution of law" (2017) 54 Am Crim L Rev 373 at 408; Bert-Jaap Koops "Law, technology and shifting power relations" (2010) 25 Berkeley Tech L 973 at 982.

6.84 A permissive statutory regime could be structured in a range of different ways. One option would be to model it on the Dutch Code of Criminal Procedure. A statutory provision could expressly permit the use of forensic DNA phenotyping but only in relation to traits that are externally visible and that have been pre-approved by Order in Council. Its use could also be limited to investigations into "serious offending". This phrase could be defined in statute to ensure a common understanding.[69]

6.85 A variation on this option would be for an oversight body to provide the pre-approval in relation to specific traits. Chapter 15 outlines various options for the establishment of such an oversight body and explores how it might operate in practice. As we note in that chapter, it would be important for any oversight body to have a central role for Māori to recognise the Treaty principles of rangatiratanga, partnership and equity and to ensure that Māori interests are central to governance and decision making about forensic DNA phenotyping.

6.86 Another alternative, which we discuss in Chapter 7, would be for Parliament to enact clear guiding principles that would indicate whether any form of forensic DNA phenotyping was permissible and to empower in statute such an oversight body to decide what DNA analysis techniques could be used in criminal casework on the basis of these principles.

6.87 Alongside a permissive statutory regime, we consider that there would be merit in introducing additional safeguards to address some of the other concerns we have identified in this chapter. Such safeguards could include the following:

(a) Limiting the use of forensic DNA phenotyping to cases where its use has been pre-approved by a judge. The judge could consider whether, in all the circumstances of the case, use of the technique would be justified. Given that use of this technique is currently very rare, obtaining pre-approval from a judge may not place too much of an administrative burden on Police. Tikanga and Treaty of Waitangi expertise is particularly important to ensure that any use of whakapapa information (which is a taonga) collected by the State is in keeping with the principle of active protection under the Treaty,[70] as well as considering NZBORA and privacy implications.

(b) Alternatively, a general oversight body with NZBORA, privacy, Treaty of Waitangi, ethics and tikanga Māori capacity could be responsible for such pre-approvals. As a further variation on this option, to support and provide accountability to an oversight body, a kaitiaki role could have powers to consider the use of forensic DNA phenotyping in any given case.[71]

(c) Making the results of the analysis confidential to Police and ESR to avoid public misconceptions.

(d) Limiting the information provided to scientists about any given case to avoid unconscious bias.

69 In Chapter 13, we discuss Police protocol on familial searching, which uses the phrase "serious offence". We explain that this term is not intuitive and can be interpreted in a range of different ways.

70 For example, there is a process under Te Ture Whenua Māori Act 1993 for matters of tikanga to be referred to the Māori Land Court by, among others, the Minister of Māori Affairs. See sections 29, and 31-32, and see Te Ture Whenua Māori Act 1993, ss 29, and 31-32; In addition, section 61 enables the Māori Appellate Court to consider any question of tikanga put to it by the High Court. See for example: *Takamore v Clarke* [2012] NZSC 116, [2013] 2 NZLR 733, at [95] and *Hauraki Māori Trust Board v Treaty of Waitangi Fisheries Commission* [1995] 2 NZLR 702.

71 Oversight options are discussed in Chapter 15.

(e) Controlling how the results are reported to police officers to avoid those officers over estimating the significance of the results.

(f) Imposing data security requirements to ensure that the results are not used for any inappropriate purpose.

(g) Requiring regular audits and reporting to promote transparency and accountability. This would also enable an assessment to be made as to the overall utility of forensic DNA phenotyping, which, as we have explained, is currently questionable.

6.88 Not all of these additional safeguards would necessarily need to be the subject of specific statutory provisions. To do so might make the statutory regime too inflexible to cope with continuing change. Instead, they could be addressed by Police and/or ESR policies, which could be developed in conjunction with an oversight body. The oversight body could also have a monitoring role. This would promote transparency and would recognise the desirability of independent oversight of these policies, given the legal, cultural and ethical issues engaged.

Q5 What concerns do you have, if any, about the use of forensic DNA phenotyping in criminal investigations?

Q6 How do you think forensic DNA phenotyping should be regulated in New Zealand?

CHAPTER 7

Forensic comparisons

INTRODUCTION

7.1 In the previous chapter, we discussed forensic DNA phenotyping – the analysis of a crime scene sample in isolation. In this chapter, we consider the more common use of DNA profiles in criminal casework – direct forensic comparison. Direct forensic comparison involves comparing a profile generated from a crime scene sample with a profile generated from another biological sample to determine whether they came from the same person. In this context, the comparator biological sample is often called a reference sample. Reference samples are obtained from known persons. They may be from suspects, victims, third parties or investigators – anyone whose DNA may be present in a crime scene sample.

7.2 The aim of comparing profiles from reference samples to profiles from a crime scene sample is to isolate and identify any unidentified DNA that may belong to the offender or any other person investigators are seeking to identify. The results of this sort of forensic comparison can be used as evidence in court.

7.3 As well as a one-on-one comparison, a forensic comparison can also be conducted on a mass scale by comparing a profile from a crime scene sample to a databank containing profiles from known people.[1] However, the results of this type of mass forensic comparison, which are reported by the Institute of Environmental Science and Research (ESR) to New Zealand Police in the form of link reports,[2] are not generally admissible as evidence in court.[3]

7.4 In this chapter, we focus on the direct forensic comparison process and identify three main areas where we think the law and current practice could be improved.

CURRENT LAW AND PRACTICE

The CIBS Act

7.5 The Criminal Investigations (Bodily Samples) Act 1995 (CIBS Act) does not expressly refer to crime scene samples or how they should be analysed.[4] The same is true of reference samples obtained from people other than suspects (elimination samples).[5]

1 We discuss DNA profile databanks in Part C of this issues paper.

2 Link reports can also include reports on any links between a crime scene sample and the Crime Sample Databank (CSD) – this will only occur if the crime scene sample is uploaded to the CSD. See Chapter 10.

3 The Criminal Investigations (Bodily Samples) Act 1995, s 71. See further discussion on this in Chapter 8.

4 See the discussion in Chapters 5 and 6.

5 Chapter 8 discusses the process of obtaining samples from suspects and elimination/reference samples.

7.6 However, the CIBS Act does refer to the analysis of suspect samples. Section 16 enables a District Court Judge to issue a suspect compulsion order if certain criteria are met. As noted in Chapter 5, one criterion is the availability of an appropriate crime scene sample for analysis.[6] A second criterion is that there must be reasonable grounds to believe that "analysis of a bodily sample taken from the [suspect] would tend to prove or disprove involvement in the offending".[7] Section 16 does not specifically state that the crime scene sample should be compared to the suspect sample as part of the analysis process, but this is what the section implies.[8]

7.7 Section 16 further implies that the analysis of a suspect sample may involve generating a DNA profile.[9] The Act defines a DNA profile as follows:[10]

> **DNA profile**, in relation to any person, means information derived from an analysis of a sample of genetic material obtained from that person, being information –
>
> (a) that is clearly identifiable as relating to that person; and
>
> (b) that is able to be compared with information obtained from an analysis (using the same technique) of another sample of genetic material for the purpose of determining, with reasonable certainty, whether or not the other sample is from that person.

7.8 This definition describes the forensic comparison process that is used in casework.[11] The use of the phrase "analysis (using the same technique)" seems to reflect an expectation that DNA profiles will be generated from crime scene samples as well. Thus, the two samples are not directly compared to each other – it is the two DNA profiles that are compared.

7.9 One problem with this definition is that it does not place any limits on the nature or type of information that could be included in a DNA profile. Take, for example, a whole genome sequence. This is the entire sequence of a person's DNA – all 3 billion base pairs written down in order. A whole genome sequence would fall within the current definition of a DNA profile in the Act. The sequence would be information "derived from an analysis of a sample", it would be "clearly identifiable" as relating to an individual; and it could be compared to another whole genome sequence.

6 Criminal Investigations (Bodily Samples) Act 1995, s 16(1)(b). See the discussion about this criterion in Chapter 5.

7 Criminal Investigations (Bodily Samples) Act 1995, s 16(1)(c).

8 See also sections 57 and 59 of the Criminal Investigations (Bodily Samples) Act 1995 which state that if a bodily sample is obtained under the Act, records of analysis of that sample and any comparison made to a crime scene sample need to be available to the person from whom the bodily sample was taken or to their lawyer.

9 Sections 16(3) and 23(3) of the Criminal Investigations (Bodily Samples) Act 1995 state that a suspect should be given the opportunity to provide a specimen from their body (such as a hair) for analysis instead of providing a biological sample (that is, a mouth swab or a blood sample). The Act explains that a DNA profile may be obtained from the specimen to determine whether the suspect was involved in the offending. Oddly, there is no equivalent statement in Part 2 explaining how a biological sample may be analysed. The only other reference to "DNA profile" in Part 2 of the Act is in section 24, which explains that a suspect compulsion order must inform the suspect that, if they are subsequently convicted of the relevant offending, "information derived from any analysis of the sample will be held on a DNA profile databank".

10 Criminal Investigations (Bodily Samples) Act 1995, s 2 definition of "DNA profile".

11 Interestingly, the phrase "forensic comparison" is only used in the Criminal Investigations (Bodily Samples) Act 1995 with reference to DNA profile databanks. Section 2 states:

> forensic comparison means the comparison of a DNA profile stored in a DNA profile databank with another DNA profile, where that comparison is undertaken for the purpose of confirming or disproving the involvement of any person in the commission of an offence.

The phrase is then used in section 27 (which states that a person may access and disclose information on a DNA profile databank for the purpose of making a forensic comparison) and section 80(c) (which enables regulations to be made prescribing procedures relating to the undertaking of forensic comparisons using a DNA profile databank).

7.10 Sections 58 and 80(a) of the CIBS Act allow for regulations to be made to prescribe how samples taken pursuant to the Act should be analysed. No such regulations have been made, so while the CIBS Act provides some guidance on what the forensic comparison process might involve in casework, it places no substantive restrictions on that process.

Current and emerging ways of analysing DNA

7.11 The non-prescriptive nature of the CIBS Act has enabled Police and ESR to use a variety of different DNA analysis techniques to conduct forensic comparisons in New Zealand. These are outlined more fully in Chapter 3 and briefly summarised here.

7.12 Traditional STR profiling is the main DNA analysis technique used by ESR to generate DNA profiles for forensic comparison. It is also the only technique that is used to analyse reference samples (that is, suspect and elimination samples). Given that reference samples come from known persons, it is possible to approach those people again to ask for a second sample if for any reason profiling of their first sample does not work.

7.13 Crime scene samples are different. They often contain only a small amount of DNA or degraded DNA, and obtaining a second sample is not an option. Given these constraints, scientists may need to use other DNA analysis techniques alongside or instead of traditional STR profiling. The other techniques most commonly used by ESR include the following:

- Low copy number (LCN) analysis – this essentially copies tiny amounts of DNA, to create enough DNA for traditional STR profiling. The LCN technique can be used for samples that contain very low-level amounts of DNA ("trace DNA"). Trace DNA may come from skin cells left behind on items that have merely been touched ("touch DNA").
- Y-STR profiling – this measures STRs on the Y chromosome, which is only found in males. A Y-STR profile is helpful in distinguishing between male and female DNA, but usually it cannot be used on its own to differentiate between close male relatives.[12]
- STRmix – this is a software program that uses mathematical algorithms to identify the most likely combination of DNA profiles in a mixed crime scene sample (a sample with more than one contributor).

7.14 In addition, as also outlined in Chapter 3, there are several other emerging DNA analysis techniques that may be introduced into criminal casework in New Zealand within the next 10 years. These could be used to analyse crime scene samples or reference samples or both. These include the following:

- Next generation sequencing kits – these kits can conduct multiple sensitive tests simultaneously, enabling scientists to analyse any combination of STRs and/or SNPs all in one go.[13]
- Whole genome sequencing – this involves identifying and recording a person's entire genome. This could be employed as a first step in casework, with scientists destroying additional information unnecessary for the purpose of the criminal investigation.

12 Y-STR profiling is discussed further in Chapter 10.

13 An SNP is a single nucleotide polymorphism. These are variations at the level of single base pairs. For example, at a certain point on the human genome one person may have a C and another person may have a G. For further see Chapter 3.

- Rapid DNA devices – this refers to portable machines that can conduct traditional STR profiling within hours. This could enable DNA profiling at crime scenes, police stations or laboratories.

Deciding whether to introduce new DNA analysis techniques

7.15 The decision as to whether to introduce a new DNA analysis kit or technique into criminal casework is currently made by ESR and Police. This occurs in one of two ways:

(a) If a new DNA analysis kit is an upgrade to an existing service (for instance, a new kit for traditional STR profiling or Y-STR profiling), ESR will make the decision based on scientific merit and international acceptance. Police is consulted or advised during the process. This is how the decisions were made to upgrade the traditional STR profiling kits used by ESR from SGM (six loci) to SGM+ (10 loci[14]) to Identifiler (15 loci[15]) and to Globalfiler (21 loci[16]).[17]

(b) If a DNA analysis technique has not previously been used, ESR and Police will make a joint decision about introducing it into casework. That decision will take into account the ethical, privacy and legal implications as well as scientific validity and cost.

The Evidence Act 2006

7.16 When ESR and Police are deciding whether to introduce a new method of analysing DNA into criminal casework, the rules surrounding the admissibility of expert evidence at trial are highly influential. That is because one of the main reasons for conducting a forensic comparison between a profile generated from a crime scene sample and a profile generated from a suspect sample is to produce results that have the potential to be presented as evidence in court. If the results of such a forensic comparison were found to be inadmissible for some reason, ultimately they would be of limited use to Police.

7.17 Section 25 of the Evidence Act 2006 deals with the admissibility of expert evidence in court. Section 25(1) states:

> An opinion by an expert that is part of expert evidence offered in a proceeding is admissible if the fact-finder is likely to obtain substantial help from the opinion in understanding other evidence in the proceeding or in ascertaining any fact that is of consequence to the determination of the proceeding.

The "substantial help" requirement involves "consideration of an amalgam of relevance, reliability and probative value".[18]

7.18 There is considerable overlap between the "substantial help" requirement in section 25 of the Evidence Act and the general exclusion rule in section 8 of that Act. Section 8 states that evidence must be excluded in any proceeding if "its probative value is outweighed by the risk that the evidence will have an unfairly prejudicial effect on the proceeding".

14 Plus the locus on the sex chromosome, so this kit tests 11 loci in all.

15 Plus the locus on the sex chromosome, so this kit tests 16 loci in all.

16 Plus the locus on the sex chromosome, a Y-STR locus, and another Y marker locus, so this kit tests 24 loci in all.

17 Globalfiler is only currently used to generate DNA profiles for the known person databank. In other instances, Identifiler is used.

18 *Lundy v R* [2014] NZCA 576 at [75].

7.19 When applying sections 8 and 25 of the Evidence Act in the context of forensic comparison DNA evidence, the *Daubert* factors are also relevant.[19] These factors emerged from overseas case law and have been applied by New Zealand courts. They set out what should be considered when assessing whether any forensic expert evidence is scientifically valid and therefore sufficiently reliable to be admitted at trial.[20] The four factors are:[21]

> (1) Whether the theory or technique can be and has been tested:
>
> Scientific methodology today is based on generating hypotheses and testing them to see if they can be falsified; indeed, this methodology is what distinguishes science from other fields of human inquiry.
>
> (2) Whether the theory or technique has been subjected to peer review and publication:
>
> Submission to the scrutiny of the scientific community is a component of "good science," in part because it increases the likelihood that substantive flaws in methodology will be detected.
>
> (3) The known or potential rate of error or the existence of standards; and
>
> (4) Whether the theory or technique used has been generally accepted.

7.20 Therefore, before introducing a new way of analysing DNA into criminal casework, Police and ESR need to be confident that the technique is scientifically valid, in the sense that the *Daubert* factors have been met. The courts are then in a position to consider that approach if a case goes to trial and the admissibility of the DNA evidence is challenged at trial or on appeal. In this way, the New Zealand courts have considered the reliability of LCN analysis,[22] Y-STR profiling[23] and RNA analysis.[24]

THREE AREAS OF CONCERN ABOUT THE FORENSIC COMPARISON PROCESS

7.21 We consider that, when it comes to the forensic comparison process, the combination of minimal statutory regulation and rapidly evolving science is an area for concern. DNA analysis techniques are now more sensitive and can generate more data than ever before. The rate of this change will only escalate, especially if next generation sequencing kits are introduced. These changes raise new ethical, practical, tikanga and legal challenges as we have already identified in relation to forensic DNA phenotyping in Chapter 6.

7.22 Many of these challenges are not unique to New Zealand. Around the world, government bodies, non-governmental organisations, scientists, lawyers and ethicists are currently debating the potential risks and benefits associated with the new wave of emerging DNA

19 These factors were originally identified by the United States Supreme Court in *Daubert v Merrell Dow Pharmaceuticals Inc* 509 US 579 (1993).

20 *Lundy v R* [2014] NZCA 576 at [42]. See also *R v Calder* HC Christchurch T154/94, 12 April 1995; *Mahomed v R* [2010] NZCA 419 at [35]; and *R v Thompson* (No 2) HC Auckland CRI-2007-090-5246, 30 May 2008 at [14] and [38].

21 This summary of the *Daubert* factors is from the Supreme Court of Canada in *R v J–LJ* 2000 SCC 51, [2000] 2 SCR 600 at [33], which was cited by the Privy Council in *Lundy v R* [2013] UKPC 28, [2014] 2 NZLR 273 at [139], and by the New Zealand Court of Appeal in *Lundy v R* [2014] NZCA 576 at [42] and *Lundy v R* [2018] NZCA 410 at [241].

22 *Manoharan v R* [2015] NZCA 237; and *Wallace v R* [2010] NZCA 46.

23 *Wallace v R* [2010] NZCA 46.

24 *Lundy v R* [2018] NZCA 410.

analysis techniques.[25] An underlying theme of this work is that there is an urgent need for informed public debate in order to build trust. As noted by leading European experts:[26]

> We cannot overemphasise the importance of the social issue of trust in the criminal justice uses of forensic genetics, even though what is known about levels of trust – especially "public trust" – is not always clear.

7.23 Just one high-profile case of needlessly intrusive or misunderstood DNA evidence has the potential to significantly undermine public trust in the criminal justice system. Such a case would also come at a tremendous personal cost to the individuals and families involved and at a societal cost, given the expense of appeals and compensation payments in miscarriage of justice cases.

7.24 Bearing those observations in mind, we have identified three main areas of concern in relation to forensic comparisons:

(a) The lack of transparency around the process for introducing new DNA analysis kits and techniques into criminal casework in New Zealand.

(b) The risk of over-estimating the probative value of trace DNA evidence and underestimating any unfairly prejudicial effect.

(c) The risk of routinely generating more information than is necessary for law enforcement purposes.

7.25 Before we explore these issues, we address a preliminary question: What is the appropriate role for judges and juries in reviewing the forensic comparison process?

THE ROLE OF JUDGES AND JURIES – A PRELIMINARY QUESTION

7.26 As we have noted, there is virtually no statutory regulation of the forensic comparison process. If DNA evidence is challenged at trial or on appeal, the court has an opportunity to consider that process, but there are several limitations. First, there are very few cases where DNA evidence is challenged. Second, reliance on the court stage of the criminal justice system to undertake after-the-fact challenges does not take into account the kind of systemic ethical and legal issues that can arise from DNA analysis.[27] Third, it is very

25 See for example Robin Williams and Matthias Wienroth *Ethical, Social and Policy Aspects of Forensic Genetics: A Systematic Review* (Northumbria University Centre for Forensic Science, 15 May 2014); Sense About Science and EUROFORGEN *Making Sense of Forensic Genetics: What can DNA tell you about a crime?* (2017); National Research Council *Strengthening Forensic Science in the United States: A Path Forward* (National Academies Press, August 2009); President's Council of Advisors on Science and Technology *Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods* (Executive Office of the President, September 2016); National DNA Database Ethics Group *Ethical Dimensions of the Application of Next Generation Sequencing: Stakeholder Consultation* (March 2017); United Kingdom Human Genetics Commission *Nothing to hide, nothing to fear? Balancing individual rights and the public interest in the governance and use of the National DNA Database* (November 2009); Sophie Rushton *Familial Searching and Predictive DNA Testing for Forensic Purposes* (Australia New Zealand Policing Advisory Agency, July 2010); and Jennifer K Wagner "DNA, racial disparities, and biases in criminal justice: searching for solutions" (2017) 27 Alb LJ Sci & Tech 95.

26 Robin Williams and Matthias Wienroth *Ethical, Social and Policy Aspects of Forensic Genetics: A Systematic Review* (Northumbria University Centre for Forensic Science, 15 May 2014) at 52. This paper was produced to further the goals of the EUROFORGEN Network of Excellence. This Network brings together some of the leading individuals and groups in European forensic genetic research in order to "develop a network of excellence for the creation of a European Virtual Centre of Forensic Genetic Research". The Network aims to further existing collaborations in this field of research and operation as well as improve knowledge of innovations in forensic genetics amongst potential users, policy makers and the general public.

27 Such as those discussed with reference to forensic DNA phenotyping in Chapter 6.

difficult for jurors, lawyers and judges to comprehend and critically assess DNA evidence at trial.

7.27 Our terms of reference do not include reviewing the law governing the admissibility of evidence in court or other trial procedures. However, by identifying the tasks that pose the most difficulty in court, we can explore whether making law reform changes outside of the courtroom may help.

The challenge posed by the admissibility decision

7.28 It has been widely recognised internationally that judges and lawyers generally lack the scientific expertise necessary to conduct the critical assessment of forensic evidence and associated literature that is required by the *Daubert* factors. This is supported by an abundance of academic literature and government reports.[28] In making this point, a 2009 report from the National Research Council in the United States warned:[29]

> … we must limit the risk of having the reliability of certain forensic science methodologies judicially certified before the techniques have been properly studied and their accuracy verified by the forensic science community.

7.29 Although the report was primarily concerned with non-DNA-based forensic analysis techniques, assessing the reliability of new DNA analysis techniques raises the same problem – it requires a considerable amount of scientific expertise. The following two examples demonstrate this.

STRmix and the PCAST Report

7.30 In 2016, the United States President's Council of Advisors on Science and Technology (PCAST) released a report on the use of forensic science in criminal cases. This report aimed to address some of the concerns that had been raised by the National Research Council. PCAST assessed the reliability of six forensic feature comparison methods commonly put before the courts: fingerprint, bite mark, firearms, footwear, hair and DNA

28 See for example National Research Council *Strengthening Forensic Science in the United States: A Path Forward* (National Academies Press, August 2009); President's Council of Advisors on Science and Technology *Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods* (Executive Office of the President, September 2016); Bernard Robertson "Likelihood ratios in evidence" [2016] NZLJ 22; John Rowan "Reviewing DNA evidence" [2011] NZLJ 400; Rhonda Wheate "The importance of DNA evidence to juries in criminal trials" (2010) 14 E&P 129; Yvette Tinsley "Science in the criminal courts: tool in service, challenge to legal authority or indispensable ally?" [2013] 25 NZULR 844; Devon Helm "Digesting the Double Helix: Receptions and Misconceptions of DNA Evidence in the New Zealand Criminal Trial" (LLB (Hons) Dissertation, University of Otago, 2015); Valerie P Hans "Judges, Juries, and Scientific Evidence" (2007) 16 JL & Poly 19; Mike Redmayne "Presenting probabilities in court: the DNA experience" (1996) 1 E&P 187; Kate Cashman and Terese Henning "Lawyers and DNA: Issues in Understanding and Challenging the Evidence" (2012) 24 CICJ 69; Angela van Daal and Andrew Haesler "DNA evidence: current issues and challenges" (2011) 23 Judicial Officers Bulletin 55; Michael B Dann, Valerie P Hans and David H Kaye "Can jury trial innovations improve juror understanding of DNA evidence" (2007) 90 Judicature 152; Mark Findlay "Juror comprehension and the hard case—Making forensic evidence simpler" (2008) 36 IJLCJ 15; J Holmgren "DNA Evidence and Jury Comprehension" (2005) 38 Canadian Society of Forensic Science Journal 123; KA Martire and others "On the interpretation of likelihood ratios in forensic science evidence: Presentation formats and the weak evidence effect" (2014) 240 Forensic Science International 61; J Ritchie "Probabilistic DNA evidence: the layperson's interpretation" (2015) 47 AJFS 440; Michael Kirby "Forensic Evidence: Instrument of Truth or Potential for Miscarriage?" (2009) 20 JLIS 1; Andrew Haesler "DNA in court" (2006) 8 Judicial Review 121; Emily Henderson and Fred Seymour *Expert Witnesses Under Examination in the New Zealand Criminal and Family Courts* (School of Psychology, University of Auckland, March 2013); and Roberta Julian and Sally Kelty "Forensic Science as a 'risky business': Identifying key risk factors in the forensic process from crime scene to court" (2015) 1 Journal of Criminological Research, Policy and Practice 195.

29 National Research Council *Strengthening Forensic Science in the United States: A Path Forward* (National Academies Press, August 2009) at 12. The broader discussion is at 9–13.

analysis. One of the DNA analysis techniques that PCAST assessed was the use of probabilistic genotyping software, including STRmix, to resolve mixed crime scene samples.[30]

7.31 As explained in Chapter 3 and above, STR mix is a software program that uses mathematical algorithms to predict the likely combination of DNA profiles in a mixed crime scene sample. Nowadays, over half of all crime scene samples are mixed (that is, they contain DNA from more than one contributor). Since 2012, ESR has routinely used STRmix to resolve these samples.[31]

7.32 PCAST described software programs like STRmix as being a "major improvement" on other techniques that have been used to analyse mixed crime scene samples, based on subjective judgments.[32] However, it also expressed some concerns. Most significantly, it noted that the eight software programs on the market at that time employed different mathematical algorithms and could yield different results for the same complex mixed crime scene sample (that is, samples with more than three contributors).[33]

7.33 PCAST concluded:[34]

> Objective analysis of complex DNA mixtures with probabilistic genotyping software is [a] relatively new and promising approach. Empirical evidence is required to establish the foundational validity of each such method within specified ranges. At present, published evidence supports the foundational validity of analysis, with some programs, of DNA mixtures of 3 individuals in which the minor contributor constitutes at least 20 percent of the intact DNA in the mixture and in which the DNA amount exceeds the minimum required level for the method. The range in which foundational validity has been established is likely to grow as adequate evidence for more complex mixtures is obtained and published.

7.34 Since the PCAST report was released, further validation studies have been published concerning STRmix, and it may now be considered scientifically valid for analysing mixed crime scene samples for up to six contributors.[35] (We understand that STRmix is not used to analyse mixtures more complex than that, so there seems to be no ongoing issue.)

7.35 PCAST, a council of world-leading scientific experts, was able to critically assess the science and associated literature to reach its conclusion. That led the forensic community

30 See Chapter 10 for a discussion of mixed crime scene samples in the context of the Crime Sample Databank.

31 See Chapter 3.

32 President's Council of Advisors on Science and Technology *Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods* (Executive Office of the President, September 2016) at 79.

33 This occurred in *New York v Hillary*, a high-profile murder case in the United States. The forensic scientists used two different software programs (STRmix and TrueAllele) and obtained different conclusions concerning whether DNA from the defendant could be said to be included within the mixed sample collected from one of the victim's fingernails. The evidence was not admitted: *New York v Hillary,* No. 2015-15, (N.Y St Lawrence City. Ct. Aug. 26, 2016). The decision is found at <www.northcountrypublicradio.org/assets/files/08-26-16DecisionandOrder-DNAAnalysisAdmissibility.pdf>. In the same case, defence counsel expressed concern about the inability to interrogate the algorithms used by the software. The developers of TrueAllele had refused access to this information on the basis that it was commercially sensitive. ESR has released the STRmix source code so it is available to prosecution and defence bars to review: see Katherine Kwong "The Algorithm Says You Did It: The Use of Black Box Algorithms to Analyze Complex DNA Evidence" (2017) 31 Harv J L & Tech 275 at 294-295.

34 President's Council of Advisors on Science and Technology *Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods* (Executive Office of the President, September 2016) at 82.

35 Bright and others "Internal validation of STRmix – A multi laboratory response to PCAST" (2018) 34 Forensic Science International: Genetics 11 at 11–24. See also *State of Florida v Dwayne Cummings* Case No 2016-CF-239 (12th Cir 2016) in which a Judge admitted expert evidence based on STRmix in a murder trial, after the PCAST report was published. The mixed crime scene sample in that case had at least four contributors.

to respond with further evidence. It seems inappropriate to ask judges to replicate that same task.

RNA analysis and *Lundy v R*

7.36 A second example of the difficulty associated with assessing scientific validity in a courtroom is the New Zealand case of *Lundy v R*.[36] Mr Lundy was convicted for the murder of his wife and daughter, but those convictions were set aside on appeal to the Privy Council and a retrial ordered.[37]

The pre-trial (to the second trial)

7.37 Before the second trial commenced, pre-trial applications were made to the High Court[38] and subsequently appealed.[39]

7.38 One of the pre-trial application issues for the Court of Appeal to determine was the admissibility of expert evidence relating to messenger RNA (mRNA).[40] Two stains on the shirt that Mr Lundy wore on the night of the murders contained central nervous system (CNS) tissue. In the original trial, there had been some dispute as to whether that tissue was from a human or non-human source.[41] As a result of this dispute, in the Privy Council the Crown produced expert evidence on mRNA to demonstrate that the CNS tissue was more likely to be from a human than any other source. The expert evidence came from scientists at the Netherlands Forensic Institute (NFI) who used a process of looking for mRNA markers with a test called "brain plex", which was developed specifically for the *Lundy* case.

7.39 In the pre-trial application judgment, the Court of Appeal reviewed the mRNA evidence and received defence expert evidence raising questions around the validity of the methodology and reliability of results.

7.40 The majority in the Court of Appeal ruled the mRNA evidence to be admissible in the second trial. The majority observed that the testing was done by scientists who were credible and eminent in their field, and the results were interpreted conservatively.[42] Although some aspects of the testing were novel, they were logical and rational extensions of established scientific theory and techniques.[43] It found that the contest between experts related to how reliable the jury should find the evidence when deciding whether to accept it, rather than the reliability of the science for the purpose of admissibility. Therefore, the majority concluded that the matter could be properly left to the jury.[44]

7.41 However, the President of the Court of Appeal dissented. Her Honour expressed concerns about the lack of validation and international standards regarding the mRNA

36 *Lundy v R* [2018] NZCA 410 and *Lundy v R* [2014] NZCA 576.

37 *Lundy v R* [2013] UKPC 28, [2014] 2 NZLR 273.

38 *Lundy v R* [2014] NZHC 2527.

39 *Lundy v R* [2014] NZCA 576.

40 As explained in Chapter 3, mRNA is the intermediary within cells between nuclear DNA and proteins and can be used to identify body fluids.

41 Note that the mRNA evidence was not called at the first trial. It had been procured in response to submissions to the Privy Council suggesting that CNS tissue on Mr Lundy's shirt was from a non-human source.

42 *Lundy v R* [2014] NZCA 576 at [80].

43 At [80]–[85].

44 At [90]–[93].

analysis and stated that she would have ruled it inadmissible under section 8 of the Evidence Act.[45] In her view, the probative value of the evidence was outweighed by the risk of its unfairly prejudicial effect.

7.42 The majority's approach reflects a trend identified by the United States National Research Council. The Council reviewed reported pre-trial admissibility decisions in federal criminal trials in the United States and noticed that there were very few decisions ruling expert forensic evidence inadmissible. Instead, trial judges seemed to prefer for this evidence to be tested in court through cross-examination and contrary expert evidence, with the burden of proof providing an additional safeguard. This placed the primary responsibility for assessing scientific validity (and therefore reliability) on jurors.[46]

The second trial

7.43 Following the Court of Appeal's pre-trial judgment, the case went to trial, and Mr Lundy was convicted for the murder of his wife and daughter (for the second time).[47] Mr Lundy then appealed those convictions.[48] One of the principal issues advanced on appeal was that the mRNA evidence was not scientifically valid and therefore unreliable. In addition, the appeal argued that it could not be said to have been substantially helpful and its low probative value was outweighed by its unfairly prejudicial effect.

7.44 In its 2018 decision, a differently constituted Court of Appeal held that the mRNA evidence was inadmissible.[49] The Court stated that the "robustness of a methodology cannot legitimately be established by an inexpert judge or jury. The essential work of validation must occur before the courtroom is entered" and must have a "track record of acceptance by a body of scientific opinion".[50] The Court went on to say:[51]

> We consider that inviting the jury to resolve the issues presented on both sides of the mRNA issue in this case was to ask them to carry out a task for which they cannot have been equipped. They were effectively required to resolve a complicated scientific debate about whether the methodology employed was robust in the absence of the general acceptance of the methodology envisaged by *Daubert*.

7.45 In the end, the Court found that the evidence cannot have been substantially helpful to the jury for the following reasons:[52]

> First, the subject matter was inherently complex, and it had to be covered by both the Crown and defence experts to a level of detail commensurate with the fact that the Crown were not able to point to widespread acceptance of the methodology employed. In a real sense the conflict was about the validity of the NFI methodology. The jury cannot realistically have been in a position to resolve the highly specialised competing claims made by reputable scientists on both sides of the argument. Second, the evidence could not cross the

45 At [68]–[69].

46 National Research Council *Strengthening Forensic Science in the United States: A Path Forward* (National Academies Press, August 2009) at 11 and 90–98.

47 *R v Lundy* HC CRI-2001-054-832244, 19 February 2015.

48 *Lundy v R* [2018] NZCA 410.

49 However, the other grounds of the appeal were rejected and the appeal was ultimately dismissed because the Court determined that, notwithstanding evidence that had been ruled inadmissible, Mr Lundy would have been convicted without such evidence and therefore no substantial miscarriage of justice had actually occurred.

50 At [241].

51 At [243].

52 At [248].

reliability threshold in the absence of peer review, known or potential rate of error, standards, and general acceptance in the scientific community.

The role of jurors

7.46 The PCAST report also discussed the role of jurors in assessing scientific evidence. The report highlighted the danger of leaving decisions about the reliability and relevance of DNA evidence to jurors. It stated that the vast majority of jurors have no independent ability to assess the strength of the evidence, observing that:[53]

> If a witness were to describe a perpetrator as "tall and bushy haired," jurors could make a reasonable judgment of how many people might match the description. But, if an expert witness were to say that, in two DNA samples, the third exon of the DYNC1H1 gene is precisely 174 nucleotides in length, most jurors would have no way to know if they should be impressed by the coincidence; they would be completely dependent on expert statements garbed in the mantle of science. (As it happens, they should not be impressed by the preceding statement: At the DNA locus cited, more than 99.9 percent of people have a fragment of the indicated size.)

7.47 PCAST explained that the potential prejudicial impact of DNA evidence is also unusually high, because jurors are likely to overestimate the probative value of a match between samples.[54] This stems in part from the difficulty of understanding the likelihood ratios that are used to explain the significance of such a match.

7.48 Research has shown that jurors struggle to engage in the probabilistic reasoning that is required to make sense of likelihood ratios.[55] This causes some jurors to conflate the likelihood ratio with the likelihood of guilt. In a 2015 decision, the New Zealand Court of Appeal commented on the difficulties that juries face in understanding the likelihood ratio.[56]

7.49 A related concern is that, given New Zealand's limited size and the economic pressures on legal aid, there are some indications that it may be difficult to secure an expert witness to review forensic evidence for the defence.[57]

7.50 Along similar lines, the Court of Appeal in its 2018 decision in *Lundy v R* flagged the possible impact of expert evidence on fair trial rights. The Court observed that, if Mr

53 President's Council of Advisors on Science and Technology *Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods* (Executive Office of the President, September 2016) at 45.

54 President's Council of Advisors on Science and Technology *Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods* (Executive Office of the President, September 2016) at 45.

55 See in particular Bernard Robertson "Likelihood ratios in evidence" [2016] NZLJ 22; Valerie P Hans "Judges, Juries, and Scientific Evidence" (2007) 16 JL & Poly 19; Mike Redmayne "Presenting probabilities in court: the DNA experience" (1996) 1 E&P 187; and Kate Cashman and Terese Henning "Lawyers and DNA: Issues in Understanding and Challenging the Evidence" (2012) 24 CICJ 69.

56 *Manoharan v R* [2015] NZCA 237 at [50]–[53]. At trial, the expert witness on DNA evidence had refused to express her findings in any way other than a likelihood ratio. She would not even endorse a rephrasing of the ratio, which stated that "it is likely that x amount of New Zealanders share this DNA". The Court of Appeal commented at [51]-[52]:

> We appreciate and respect the need for scientists to be precise. However in the trial context, it is also important that the evidence be presented in a way that is easily understood by people… In this case the DNA evidence was not strong and there was a real risk that unless it was expressed in a way that made its limitations readily apparent to a layperson, the jury would attribute a weight to it that was not warranted.

57 See Kelly Makiha "Murder Trial May be Delayed" *The New Zealand Herald* (online ed, Auckland, 9 March 2016). Brewer J stated that, if he had to adjourn a murder trial, he would call for an inquiry into the New Zealand forensic and pathology system. The adjournment was requested because defence counsel was having difficulty finding a forensic pathologist. Brewer J explained that he adjourned two other murder trials in 2015 because of difficulties in getting pathology reports.

Lundy had not had the resources to obtain expert assistance to question the reliability of the mRNA evidence, it would have gone to the jury without challenge:[58]

> The notion that the robustness of cutting edge scientific techniques can be established before juries creates a clear tension with the right to a fair trial in the many cases that might arise where the defence would simply be unable, through lack of resources, to mount soundly based challenges to the science relied on by the Crown.

Summary

7.51 The task of assessing the relevance and reliability of DNA evidence in court is sometimes very difficult. To address this – and wider concerns about forensic evidence more generally – commentators have suggested an array of reform options that could be adopted to improve trial procedures.[59] In addition, we think that, in relation to the forensic comparison process, more can be done outside of the courtroom to provide reassurance about the scientific validity of DNA evidence before it is given in court.

THE INTRODUCTION OF NEW ANALYSIS TECHNIQUES

The issue

7.52 There is a need to ensure that new ways of analysing DNA are not introduced into casework too soon and are also not perceived to be introduced into casework too soon. By "too soon", we mean before scientific validity, legal requirements and ethical implications have been appropriately assessed and addressed. Transparency and trust are crucial. For that reason, we think that the introduction process should be more open.

7.53 As explained above, the CIBS Act does not place constraints on what analysis is undertaken as part of any forensic comparison process. Ordinarily, this process involves traditional STR profiling, but an array of supplementary techniques has developed to assist with the analysis of crime scene samples. As we have noted above, the decision to introduce one of these techniques into criminal casework is made jointly by Police and ESR.

7.54 However, there is a strong argument that Parliament should have more input into the introduction of new analysis techniques. According to the *Legislation Guidelines* approved by Cabinet, significant policy decisions that either affect fundamental human rights or that relate to public search powers should be dealt with in statute.[60] One indicator of significance is whether the policy decision has the potential to give rise to

58 *Lundy v R* [2018] NZCA 410 at [247].

59 For instance, Emily Henderson and Fred Seymour *Expert Witnesses Under Examination in the New Zealand Criminal and Family Courts* (School of Psychology, University of Auckland, March 2013) at 29–41 suggest the options of raising the admissibility threshold, educating the judiciary and lawyers, juror training, expert panels to provide advice to judges, court-appointed experts, accreditation and pre-trial peer review, codes of conduct, training of experts in court craft, consecutive expert evidence, concurrent expert evidence ("hot-tubbing"), increased pre-trial discussions, increased judge-alone trials, disciplinary actions and tortious liability. Some of these options are considered in Law Commission *Second Review of the Evidence Act 2006: Te Arotake Tuarua i te Evidence Act 2006* (NZLC IP42, 2018) at ch 10, namely: whether expert witnesses in criminal proceedings should be required to adhere to a code of conduct; whether expert witnesses in criminal proceedings should be subject to an obligation to confer with another expert witness if directed to do so; and whether section 26(2) should be amended to provide guidance on when the evidence of an expert who has failed to comply with the Code of Conduct in the High Court Rules 2016 can be given.

60 Legislation Design Advisory Committee *Legislation Guidelines* (March 2018) at [14.1].

controversy.[61] In our view, the adoption of some DNA analysis techniques such as next generation sequencing kits, whole genome sequencing or rapid DNA devices are likely to fall into this category. As we explained in Chapter 6, forensic DNA phenotyping probably does too.

7.55 There is also an argument that the scientific validity of new DNA analysis techniques should be the subject of an independent review, prior to introduction into casework. This would promote transparency and would help to address the concerns outlined at [7.26] to [7.51] about the reliability of DNA evidence being tested in court.

Options for reform

New analysis techniques could be expressly permitted by statute

7.56 The most straight-forward way of addressing potential issues with new analysis techniques would be for new legislation to expressly identify the DNA analysis techniques that may be used in any forensic comparison process. Parliament could seek independent advice from the scientific community for this purpose. However, simply listing permissible techniques in primary (or even secondary) legislation may not be appropriate, given the speed with which the science is developing.

There could be a statutory process for making decisions about new analysis techniques

7.57 An alternative would be to leave the decision to introduce new analysis techniques with Police and ESR but to impose statutory requirements on the decision-making process. For example any such decision could be required to:

- take into account specified considerations;
- comply with guiding principles;
- be made following consultation with specified organisations; and/or
- be the subject of an independent pre-approval process.

7.58 All of these factors would also benefit from statutory recognition of the role currently performed by ESR.

Considerations and guiding principles could be in statute

7.59 If the decision to introduce a new DNA analysis technique is to remain with Police and ESR, new legislation should either contain mandatory statutory considerations or guiding principles. This would make the decision-making process much more transparent, and there would be clearer direction from Parliament.

7.60 Any mandatory statutory considerations could include the factors that we know already influence this decision: scientific validity, cost, ethical and legal implications (including tikanga, the Treaty of Waitangi, the New Zealand Bill of Rights Act 1990 (NZBORA) and privacy).

7.61 In terms of principles, one option would be for new legislation to state that forensic DNA analysis should be limited to (or should generally focus on) analysis of non-coding regions of the genome. This principle would align with the original policy behind the CIBS

[61] At [14.1].

Act and would alleviate some privacy concerns.[62] This option also aligns with the best-practice guidance issued by the Forensic Genetics Policy Initiative in 2017. The Initiative explained:[63]

> Although the role of DNA in disease is complex, forensic DNA profiles generally focus on individual differences in "non-coding" DNA (the parts of the DNA that do not code for proteins that play important biological functions in the human body). Although such markers can sometimes be statistically associated with disease within a family, they are not predictive of disease in the general population. Legislation should therefore specify that only forensic DNA profiles are extracted and stored in DNA databases and that they are based on non-coding DNA that provides no information on a person's health risks or physical characteristics (other than their sex).

7.62 However, as we learn more about non-coding areas of the genome, new privacy concerns may arise. Further, this principle could prevent (or limit, depending on the wording) Police from capitalising on emerging techniques, such as forensic DNA phenotyping and whole genome sequencing, should their use be appropriate or required in any given case.

Statutory considerations and guiding principles could include consultation requirements

7.63 This option could include a requirement for Police and ESR to consult with key stakeholders, such as the Privacy Commissioner, tikanga experts and/or an oversight body. The tension here is between ensuring that the right mix of people with scientific, ethical, legal and cultural expertise are involved, whilst ensuring that the consultation requirements remain workable. One of the functions of the Biometrics and Forensics Ethics Group in the United Kingdom is to provide the Home Office with publicly available advice about the adoption of new analysis techniques.[64] Oversight is discussed in Chapter 15.

There could be an independent pre-approval process

7.64 A variation on this option would be to involve an independent oversight body formally pre-approving the use of DNA analysis techniques in criminal casework. Chapter 15 outlines various options for the establishment of such an oversight body and explores how it might operate in practice.

7.65 The pre-approval process could have a narrow focus – such as providing an independent review of scientific validity. This would address some of the concerns we have about assessing the reliability of new techniques in court. Alternatively, it could focus broadly on whether the applicable mandatory statutory considerations or guiding principles were complied with – including ensuring that appropriate consideration is given to scientific, ethical, legal and cultural issues. This is one of the options that we put forward in relation to forensic DNA phenotyping in Chapter 6. Oversight options are discussed in Chapter 15.

62 See the discussions about the original policy behind the Criminal Investigations (Bodily Samples) Act 1995 in Chapters 4 and 6.

63 Forensic Genetics Policy Initiative *Establishing best practice for forensic DNA databases* (September 2017) at [4.1]. The Forensic Genetics Policy Initiative is an international collaborative group. It undertook a seven-year project that, aimed to set the worldwide human rights standards for the use of forensic DNA profile databanks. We discuss the Initiative further in Chapter 15.

64 Biometrics and Forensics Ethics Group (BFEG) *Terms of Reference, Code of Practice and Working Protocol* (Home Office, April 2017). We discuss the BFEG and its functions in Chapter 15.

7.66 In terms of procedure, pre-approval could be obtained through a formal application process. As part of the application, ESR and Police could be required to prepare privacy and/or cultural impact assessments. If the applications were publicly available, that would promote public scrutiny. They could also be used to frame consultation discussions. In deciding how prescriptive to make this process, however, it is important to be mindful of the costs of establishing a body to conduct pre-approval as well as the costs to those involved in the process.

The role of Police forensic services provider could be recognised in statute

7.67 The CIBS Act does not mention ESR or its role as Police's forensic services provider.[65] This role carries a considerable amount of social responsibility, particularly given the degree of influence that ESR has over the introduction of new DNA analysis techniques. For this reason and to promote accessibility, we think that the role should be recognised in statute. This would also provide greater legal certainty as to the rights and obligations between Police and ESR.

7.68 This proposal reflects our preliminary view that there is no case for significant reform when it comes to ESR's role. The operational relationship with Police seems to work well. Nothing that we have seen during our review so far suggests that major change is required, such as Police undertaking forensic analysis work in-house. Further, we consider that the current approach – of Police choosing and contracting its own forensic science service provider – also works well. It provides flexibility and allows for market forces to have an impact on quality and cost. Therefore, we do not think that any new Act should refer directly to ESR.

7.69 Instead, new legislation could empower Police (potentially in conjunction with Parliament or another appropriate body) to appoint a "forensic services provider". The appointment could be conditional on the provider meeting certain requirements. These could include requirements to meet specified international laboratory accreditation standards and/or to arrange for staff to undertake regular proficiency tests. Such requirements are common overseas in countries where multiple private laboratories provide forensic science services to local and federal police. These requirements would reassure the public that any provider contracted by Police will continue to be appropriately qualified.

7.70 This would effectively codify the current practice. We think that requests by other enforcement agencies for DNA analysis should continue to be filtered centrally through Police. This is mainly for practical reasons, including assisting ESR to prioritise the casework. Any requests by accused persons and convicted offenders to have crime scene samples analysed or reanalysed should also be filtered centrally by Police because it has a statutory responsibility for law enforcement.[66]

65 See Key terms and actors at the beginning of this issues paper. This describes the basis of the relationship between Police and ESR.

66 By way of example, in New South Wales, a convicted person may apply to the Commissioner of Police to have a crime scene sample analysed or reanalysed. If the Commissioner declines, the convicted person may apply to the Supreme Court for an order requiring the Commissioner to comply with the request. In the United Kingdom, the Criminal Cases Review Commission is involved in considering this type of request. See Policing Act 2008, s 9(c).

Q7 What concerns do you have, if any, about the introduction of new DNA analysis techniques into casework in New Zealand?

Q8 What factors do you think should be considered before a new DNA analysis technique is introduced into casework? Who do you think should make that decision?

Q9 Do you think that the role of Police "forensic services provider" should be recognised in statute? If so, how do you think that role should be structured?

TRACE DNA – THE RISKS

The issue

7.71 As explained in Chapter 3, new DNA analysis techniques are capable of generating profiles from very small biological samples. These samples may be invisible to the naked eye. This is described as trace DNA.

7.72 Experts consider that, as the sensitivity of DNA analysis tests increases, so do the problems.[67] These include heightened risks of human error through contamination, cognitive bias and attaching undue significance to background DNA (that is, DNA that was present prior to the offending) or to DNA that has been transferred (that is, transferred from one person to another before being deposited at the crime scene). In the early days of DNA analysis, a sizeable blood or semen stain was required to generate a DNA profile, but now only a tiny sample is required (such as the skin cells left behind in fingerprints). Therefore, it is likely to be increasingly common for crime scene samples to contain background or transferred DNA.

7.73 Many of these issues were identified and discussed when LCN analysis was introduced into casework in the mid-2000s.[68] These issues will only be amplified if sensitive next generation sequencing kits for analysis of crime scene samples are adopted. Using these kits to reanalyse crime scene samples from so-called "cold cases" would also be problematic. That is because the likelihood of there being contamination is even higher due to historically poor crime scene sample collection and storage processes. In a 2015

67 See for example Sense About Science and EUROFORGEN *Making Sense of Forensic Genetics: What can DNA tell you about a crime?* (2017) at 16–23; Robin Williams and Matthias Wienroth *Ethical, Social and Policy Aspects of Forensic Genetics: A Systematic Review* (Northumbria University Centre for Forensic Science, 15 May 2014) at 26; Karen Richmond "DNA profiling: Transfer and Persistence *R v Tsekiri* [2017] EWCA Crim 40" (2017) 81 JCL 275; and Nicola Davis "DNA in the dock: how flawed techniques send innocent people to prison" *The Guardian* (online ed, United Kingdom, 2 October 2017) citing a study of 218 successful appellate DNA cases in England and Wales from 2010–2016 conducted by Ruth Morgan, the Director of the Centre for the Forensic Sciences at University College London (see Nadine Smit, Ruth Morgan and David Lagnado "A systematic analysis of misleading evidence in unsafe rulings in England and Wales" (2018) 58 Science & Justice 128).

68 See *R v Hoey* [2007] NICC 49 and the resultant report: Brian Caddy, Graham Taylor and Adrian Linacre *A Review of the Science of Low Template DNA Analysis* (Home Office, 11 April 2008); *Wallace v R* [2010] NZCA 46; *R v Lepper* CA334/04, 1 November 2005; Anna Sandiford *Forensic Science and the Law: A Guide for Police, Lawyers and Expert Witnesses* (Thomson Reuters, Wellington, 2013) at [16.7.5]; SallyAnn Harbison, Marita Fallow and Donna Bushell "An analysis of the success rate of 908 trace DNA samples submitted to the Crime Sample Database Unit in New Zealand" (2008) 40 AJFS 49.

report, the United Kingdom's Government Chief Scientific Adviser warned: "[O]ur ability to analyse may outstrip our ability to interpret".[69]

7.74 These issues are compounded by two well-documented courtroom trends that we have already discussed:

(a) There tends to be limited forensic literacy amongst key actors in the criminal justice system (judges, lawyers and jurors).

(b) Juries find it difficult to understand the likelihood ratios that are used in court to explain the significance of DNA evidence.

7.75 The following cases demonstrate some of the risks associated with trace DNA.

7.76 In *R v Jama* (Australia, 2009) a woman was found unconscious in a toilet cubicle.[70] While she did not have any recollection of what had occurred, she believed she was sexually assaulted and she underwent a medical examination. DNA in the resultant crime scene sample was linked to Mr Jama, who was convicted of raping the woman. The court later found that the crime scene sample taken from the woman was contaminated and it was likely that no rape had occurred. The doctor who examined the woman had taken swabs from another woman 28 hours earlier, who had engaged in sexual activity with Mr Jama;[71] however, no charges were laid in relation to that earlier event. He spent 16 months in prison before the miscarriage of justice was discovered.[72]

7.77 The case of Adam Scott (United Kingdom, 2011) involved a similar contamination issue although the case did not proceed to trial.[73] He was arrested for rape and held in custody for five months and then released after his phone records corroborated his assertion that he was in a different town at the time of the alleged rape. This led to the discovery that the crime scene sample from the rape investigation had been contaminated by a biological sample taken from him for an unrelated 'spitting incident'.[74]

7.78 In *R v Tsekiri* (United Kingdom, 2017) a woman was approached by two men as she got into her car in London.[75] One of the men opened her car door. A struggle ensued and the man stole the woman's necklace. Both men then ran away. A swab was taken from the car door. Analysis revealed a mixed crime scene sample with one major contributor and at least one minor contributor. The major contributor's profile was consistent with the

69 United Kingdom Government Office for Science *Forensic Science and Beyond: Authenticity, Provenance and Assurance – Annual Report of the Government Chief Scientific Adviser 2015* at 6.

70 *R v Jama* (unreported) VSCA, 7 December 2009.

71 The doctor had not sufficiently cleaned a tray after the first medical examination before he used it again in the second examination. It is not clear whether there were only trace amounts of DNA left on the tray or whether there was a larger amount of DNA present. Nonetheless, the case does serve to highlight the risks and potential impact of contamination.

72 Marcus Smith and Monique Mann *Recent Developments in DNA evidence* (Australian Institute of Criminology, No 506, November 2015). A former Supreme Court Justice examined Mr Jama's case and provided a report on the reasons for the miscarriage: Frank Vincent *Report: Inquiry into the Circumstances that Led to the Conviction of Mr Farah Abdulkadir Jama* (Victorian Government Printer, 2010). Vincent concluded at 11:

> I have been left with the deep impression that at virtually every point, and by almost everyone involved, [DNA evidence] was handled with so little insight into the issues which it presented that no need was seen to explore or conduct research into them.

73 Sense About Science and EUROFORGEN *Making Sense of Forensic Genetics: What DNA can tell you about a crime?* (2017) at 7.

74 In 1999, there was also a similar contamination case in New Zealand, although this was before LCN analysis or other forms of analysing trace DNA were in use. The case led to an external inquiry (Thomas Eichelbaum and John Scott *Report on DNA Anomalies for the Minister of Justice* (30 November 1999)) and to substantial improvements to ESR's anti-contamination policies.

75 *R v Tsekiri* [2017] EWCA Crim 40, [2017] 1 All ER 394.

DNA profile of Mr Tsekiri, who was arrested and who refused to make a statement. The DNA evidence was the sole evidence at trial. The trial judge rejected a submission that there was insufficient evidence for the case to go to the jury, and the appellant was convicted. The Court of Appeal upheld the trial judge's decision on appeal. The Court highlighted that the expert's opinion was that it was "unlikely" that the DNA in the crime scene sample had been transferred and noted that defendant was the major contributor to the sample.[76] The decision has been criticised. In particular, it has been noted that studies have shown that a major contributor's DNA can be deposited through transfer and that a major contributor may not have been the last person to touch an item.[77] The DNA evidence presented to the jury may, therefore, have been oversimplified.

7.79 In *R v Tsekiri* the Court of Appeal summarised four other appellate cases in the United Kingdom where trace DNA was the sole or main evidence at trial.[78] Background DNA or transfer were also central issues in the murder cases of *R v Hillier*[79] and *Fitzgerald v R*[80] in Australia and of *McLaughlin v R*[81] and *Preston v R*[82] in New Zealand. Unlike the Australian murder cases, however, the DNA evidence in *McLaughlin v R* and *Preston v R* was only a small part of the Crown case. DNA transfer was a disputed issue in the New Zealand case of *Young v R*[83] as well.[84]

76 At [20].

77 Andrew Roberts "DNA evidence: R v Tsekiri" [2017] 8 Crim LR 628. See also Karen Richmond "DNA profiling: Transfer and Persistence *R v Tsekiri* [2017] EWCA Crim 40" (2017) 81 JCL 275.

78 *R v Grant* [2008] EWCA Crim 1890; *R v Ogden* [2013] EWCA Crim 1294; *R v Bryon* [2015] EWCA Crim 997, [2015] 2 Cr App R 299; and *R v FNC* [2015] EWCA Crim 1732, [2016] 1 WLR 980.

79 *R v Hillier* [2007] HCA 13, (2007) 233 ALR 634. This case was an appeal against a murder conviction. Hillier had been found guilty after his DNA was found on the victim's (his former partner) pyjamas. On appeal, the defence argued that the DNA could have been transferred via the children of the victim and the accused and was not conclusive as to guilt. Circumstantial evidence also suggested the accused was innocent. Ultimately, the Court quashed the conviction. It held that the DNA evidence was considered in isolation, and too much weight had been placed on the DNA evidence in the context of the case.

80 *Fitzgerald v R* [2014] HCA 28, (2014) 311 ALR 158. The defendant was convicted of murder based on DNA evidence found on a didgeridoo at the scene. No other evidence linked the defendant to the crime. On appeal, counsel argued that the basis for the verdict was unreasonable as the DNA could have been transferred by other means, such as by shaking hands with someone who subsequently came into contact with the didgeridoo. The Court agreed and held at [36] that: "The Jury, acting reasonably, should have entertained a reasonable doubt as to the appellant's guilt." Alternative hypotheses, and in particular the possibility of secondary transfer, were "not unreasonable and the prosecution had not successfully excluded them". The appellant's conviction was quashed.

81 *McLaughlin v R* [2015] NZCA 339. This case was an appeal against a murder conviction. Expert evidence at trial showed that DNA found under the victim's fingernails matched the defendant's DNA profile. It was unclear whether the sample was present from direct or indirect transfer – experts canvassed both options at trial. Counsel for the defendant argued the jury was not entitled to find that the DNA was present from direct transfer. The Court of Appeal disagreed and held that the jury was entitled to make this finding in the context of all of the evidence adduced at trial.

82 *Preston v R* [2016] NZCA 568, [2017] 2 NZLR 358. This case was an appeal against a murder conviction. One of the grounds advanced was that the trial judge failed to put the defence case properly regarding the significance – or lack thereof – of DNA evidence on the handle of the knife used in the killing. In particular, the defence claimed the Judge failed to convey the issues surrounding DNA transference raised by experts at trial. The Court of Appeal disagreed and stated at [115] that the Judge accurately conveyed that the mere presence of DNA on the knife said "nothing of how it got put there, whether directly from the owner of the DNA or by transfer through some other intermediate means".

83 *Young v R* [2010] NZCA 309. This case was an appeal against a conviction for armed robbery. DNA matching the defendant's DNA profile was found on abandoned latex gloves believed to be used in the offence. The defendant's profile was the only DNA profile located on the gloves. Part of the defendant's argument on appeal was that the DNA present on the gloves was innocently transferred there. Thus, the Jury was arguably not entitled to find that the defendant was the robber. The Court disagreed and held at [18] that the jury was "fully entitled to find that the DNA was on the gloves because Mr Young was wearing them".

84 Another 2018 case is currently subject to a suppression order.

Discussion

7.80 As discussed at [7.46] to [7.50] there is extensive academic literature on the risk of overestimating the probative value of DNA evidence and underestimating its unfairly prejudicial effect.

7.81 It has been suggested that, in practice, the presentation of DNA evidence reverses the presumption of innocence, as juries expect defendants to provide an explanation for their DNA being present.[85] This can be an impossible task, and there have been calls for a prohibition on convicting a person based solely on DNA evidence.[86] Commentators have also suggested that trial processes should be amended to improve the understanding of jurors.[87] As noted above, these suggestions fall outside our terms of reference. However, the literature calls for steps to be taken outside of the courtroom as well, including:[88]

- greater emphasis on improving the quality of crime scene examinations;
- more scrutiny around laboratory procedures;
- more constraints around the extent and timing of communications between forensic scientists and investigating police officers;
- a shift in laboratory culture to promote recording and reporting of quality issues (as medical laboratories do);
- additional research into DNA transfer, persistence and "shedder status";[89] and
- increased public education.

85 United Kingdom Human Genetics Commission *Nothing to hide, nothing to fear? Balancing individual rights and the public interest in the governance and use of the National DNA Database* (November 2009) at 28–29; and David Turner "Towards a DNA Dystopia? Human Rights Concerns under the Criminal Investigation (Bodily Samples) Act 2009" (2011) 2 NZLSJ 502 at [D6].

86 Sense About Science and EUROFORGEN *Making Sense of Forensic Genetics: What can DNA tell you about a crime?* (2017) at 7. Notably, corroboration of DNA evidence is a legal requirement in Scotland: Nuffield Council on Bioethics *The forensic use of bioinformation: ethical issues* (September 2007) at [7.11].

87 See the discussion at [7.51].

88 President's Council of Advisors on Science and Technology *Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods* (Executive Office of the President, September 2016) at 73–75; Forensic Science Regulator *Guidance: Cognitive Bias Effects Relevant to Forensic Science Examinations* (2015); EJAT Mattijssen and others "Implementing context information management in forensic casework: Minimizing contextual bias in firearms examination" (2016) 56 Science and Justice 113; Karen Richmond "DNA profiling: Transfer and persistence" (2017) 18 JCL 275–277; Kelty and others "Professionalism in Crime Scene Examination: The Seven Key Attributes of Top Crime Scene Examiners" (2011) 2 Forensic Science Policy and Management 175.

89 Shedder status is explained in Sense About Science and EUROFORGEN *Making Sense of Forensic Genetics: What can DNA tell you about a crime?* (2017) at 18:

> One way in which we release DNA into our environment is through the constant shedding of skin cells onto our clothes and the surfaces we touch. But not everyone does this at the same rate. People who shed lots of skin cells — possibly because of a skin condition such as eczema, dermatitis, dandruff, or even sunburn — are known as 'high status shedders' and are more likely to deposit DNA. For instance, a recent study found that people with atopic dermatitis shed four times as much DNA as healthy individuals. Conversely, a 'low status shedder' is less likely to deposit DNA. But not everyone does this at the same rate and it will also vary within the same person at different times.

Options for reform

Review and audit of new techniques generally

7.82 Earlier in this chapter, we introduced the option of any new Act allowing for the appointment of a Police "forensic services provider".[90] We explained that this appointment could be conditional on the provider meeting specified accreditation and proficiency testing standards. In addition to those requirements, the Act could require the provider to maintain policies (compliant with international best practice) in relation to the types of matters described at [7.81]. An oversight body (see [7.64] and discussion in Chapter 15) could also be involved in reviewing the policies for consistency with NZBORA and the principles of the Treaty of Waitangi and considering privacy and tikanga issues and/or auditing as the science continues to develop. The oversight body could itself be given obligations in relation to public education and promoting necessary research in this area. These sorts of requirements and obligations could help to reduce the general risk of misunderstandings and misuse of trace DNA evidence.

Review and audit of new techniques in specific cases

7.83 In relation to specific cases, the existing criminal appeal system in New Zealand may provide sufficient opportunities to challenge trace DNA evidence. However, if it was considered that an additional safeguard should be put in place, one option would be to empower an independent body to review any conviction that is based solely on trace DNA evidence. For instance, this could be a function given to a Criminal Cases Review Commission, if such a Commission were established in New Zealand.[91]

Q10 What concerns do you have, if any, about the increased use of highly sensitive DNA analysis techniques (that enable trace DNA to be analysed) in criminal investigations?

ROUTINELY OBTAINING MORE INFORMATION THAN NECESSARY

The issue

7.84 We understand from ESR that new DNA analysis kits are on the international market that simultaneously target more than 50 STRs and 200 SNPs (including SNPs that are ancestry informative markers and SNPs associated with externally visible characteristics). Other kits are available that sequence the entire mitochondrial genome, which passes from generation to generation largely unchanged through the maternal line. This technology has been used for a long time for non-forensic DNA analysis, and these kits have recently been adopted by some overseas laboratories for forensic use. These kits could be used to analyse crime scene samples and/or reference samples on a case-by-case basis or routinely. The results could even be stored on databanks.

[90] See the discussion at [7.67].

[91] See Chapter 15 for further discussion.

7.85 ESR has also advised us that the most cost-efficient way of analysing DNA in the foreseeable future could involve whole genome sequencing of nuclear (as opposed to mitochondrial) DNA. The international forensic community has not yet considered how this might work in practice, but from a policy perspective, it is clear that strict rules would need to be in place around retaining only the amount of information in a whole genome sequence required for law enforcement purposes and destroying information that is not required for this purpose.

Discussion

7.86 Like forensic DNA phenotyping, which we discussed in Chapter 6, these developments represent a major shift from the policy that underpins the CIBS Act, which was based on an assumption that only non-coding regions of the genome would be targeted in DNA profiling. Our view is that any new forensic analysis technique that targets *coding* regions of the genome should be debated in Parliament to obtain a new public mandate.

7.87 As we explained in Chapter 6, there are particular legal and ethical issues associated with analysing SNPs or STRs that are ancestry informative markers or that are linked to externally visible characteristics. We explained that such analysis could only be justified on a case-by-case basis in cases involving serious criminal offending. As such, we do not think that it should be included in any routine analysis process.

7.88 Additionally, we do not see the law enforcement need to significantly increase the amount of data included in DNA profiles. One of the core information privacy principles is to collect only the amount of personal information that is necessary for any given purpose.[92] Personal information is information about an identifiable person, so this principle applies regardless of the sensitivity of the information in question.[93] As such, there needs to be some justification for any significant expansion of the number of STRs or SNPs in DNA profiles, whether they are in coding or non-coding regions of the genome.

7.89 It is possible that, in the future it will be cheaper to undertake more extensive analysis than to undertake less extensive analysis. However we do not think that this equates to a law enforcement need to generate the extra information. Further we do not think that commercial drivers should be the focus of policy development in this area.[94]

7.90 If a case could be made for extensive analysis (based on utility and cost efficiency), there would still be significant practical barriers to its implementation in casework. For instance, whole genome sequencing would require extensive computing storage even if entire sequences were only stored temporarily. This raises significant concerns about data security. In addition, we understand that effective data destruction can be technically difficult, which is a further concern.

92 Privacy Act 1993, s 6 information privacy principle 1.

93 See the discussion of the definition of "personal information" in Chapter 6.

94 Similar concerns about the influence of the commercial actors who develop new DNA analysis kits were raised by Robin Williams and Matthias Wienroth *Ethical, Social and Policy Aspects of Forensic Genetics: A Systematic Review* (Northumbria University Centre for Forensic Science, 15 May 2014) at 7.

Options for reform

7.91 The prospect of introducing whole genome sequencing into criminal casework demonstrates the need for Parliament to turn its mind to the question of how much data-mining of crime scene sampling is justified, especially on a routine basis.

7.92 We have introduced the idea that new legislation could contain a guiding principle that DNA analysis should focus on non-coding regions of the genome.[95] A variation on this option would be for the legislation to at least describe what routine analysis of crime scene samples and reference samples may involve. Any analysis technique falling outside that general description could then be subject to more rigorous safeguards.[96]

7.93 One possible model for this approach could be Ireland's new Criminal Justice (Forensic Evidence and DNA Database System Act) 2014.[97] The definitions of "crime scene sample", "DNA profile" and "match" in that Act are:[98]

> "crime scene sample" … means a sample of biological material found at, or recovered from, a crime scene from which a DNA profile in respect of a person may be generated;
>
> "DNA profile", in relation to a person, means information comprising a set of identification characteristics of the non-coding part of DNA derived from an examination and analysis of a sample of biological material that is clearly identifiable as relating to the person and that is capable of comparison with similar information derived from an examination and analysis of another sample of biological material for the purpose of determining whether or not that other sample could relate to that person;
>
> "match", in relation to two DNA profiles …, means that there is such a degree of correspondence between them that they are indistinguishable and it is probable that they relate to the same person, and the degree of that probability can be indicated statistically.

7.94 These definitions imply that – ordinarily – crime scene samples and reference samples will be analysed to generate DNA profiles and the profiles will come from non-coding regions of the genome. This is a simple and transparent way of providing at least some statutory guidance on how these samples should be analysed.

Q11 What limits, if any, do you think there should be on the type and/or amount of information that may be included in a DNA profile that is generated from a crime scene sample and a reference sample for direct forensic comparison purposes?

95 See the discussion at [7.59].

96 For instance, pre-approval from an independent body could be required.

97 Annex N of the Forensic Genetics Policy Initiative *Establishing Best Practice for Forensic DNA Databases* (September 2017) provides examples of legal provisions around the world that restrict forensic DNA profiles to non-coding DNA. The list includes provisions from Russia, the European Union Prüm decisions, Argentina, Belgium, Germany, Portugal, South Korea and South Africa.

98 Section 2(1) of the Criminal Justice (Forensic Evidence and DNA Database System Act) 2014 (Ireland). We note that the Irish Act does not prohibit these samples from being analysed in a different way.

CHAPTER 8

Reference samples – direct collection

INTRODUCTION

8.1 In Chapter 5, we explained how crime scene samples are collected. In Chapters 6 and 7, we explained how those crime scene samples are forensically analysed in isolation or alternatively how a DNA profile is generated and then compared to a DNA profile from a known person.

8.2 In this chapter, we look at the collection of samples from such known persons. They may be suspects, victims, third parties, investigators – anyone whose DNA may be present in a crime scene sample.

8.3 A sample from a known person is collected so that a profile can be generated. That profile is then compared to a crime scene profile. The purpose of the comparison is to look for matches or to help rule people out of criminal investigations. In this chapter, we refer to samples from known persons as reference samples.

8.4 In the vast majority of cases, police officers obtain reference samples directly from the person concerned. For suspects, this process is governed by the Criminal Investigations (Bodily Samples) Act 1995 (CIBS Act). For non-suspects (victims, third parties and investigators), a non-statutory regime applies. This chapter outlines these two regimes and explores issues around the physical process of collection, consent, elimination sampling and mass screening.

8.5 Chapter 9 looks at the much less common method of collecting reference samples through indirect means, for example, seizing a suspect's coffee cup or toothbrush and then analysing that for DNA.

CURRENT LAW – SUSPECT SAMPLES

The criteria for obtaining a suspect sample

8.6 We begin by considering the regime set out in the CIBS Act for collecting biological samples directly from suspects.

8.7 Parts 2 and 2A of the CIBS Act set out the procedures that apply. The procedure differs depending on the age of the suspect and whether they are therefore a "child" (defined in section 2 of the CIBS Act as 10 to 13 years of age), a "young person" (defined in section 2 of the CIBS Act as 14 to 16) or an adult (not defined in the CIBS Act but by default, means

17 years and over). It is intended that from 1 July 2019, the definition of "young persons" will change to include 17 year olds.[1]

8.8 For adults and young persons, the police officer must first ask the person to provide a suspect sample by consent. If the person refuses, the option of applying to the District Court (or, if an adult, the High Court)[2] for a compulsion order becomes available.

8.9 For children the procedure depends on the seriousness of the offence under investigation. For very serious offending for which the child can be prosecuted, the only option is a compulsion order. For less serious offending for which the child cannot be prosecuted, the only option is to obtain a suspect sample by consent. The sample may then be used to decide whether the child committed the offence. This in turn may be used to decide whether the child should be the subject of a care and protection order under the Oranga Tamariki Act 1989.

8.10 Table 1 sets out the statutory criteria for each category of suspect.

Table 1: Criteria for obtaining a suspect sample

AGE	CRITERIA FOR REQUESTING A SAMPLE BY CONSENT	PROCEDURE FOR CONSENT	ACTION IF THE SUSPECT REFUSES
Adult and young person	A constable must: • believe that the adult or young person may have committed an imprisonable offence or the offence of peeping and peering[3] (whether or not there is good cause to suspect that they committed the offence);[4] and • believe on reasonable grounds that analysis of the biological sample would tend to confirm or disprove the suspect's involvement in the offending.[5]	The constable must provide the suspect (and a parent if it is a young person) with a written notice in the prescribed form, oral advice on certain matters and the opportunity to take legal advice.[6] If the person consents, their consent must be recorded in writing or on video.[7] For young persons, the suspect and a parent must consent.[8]	Option to apply for a suspect compulsion order or a juvenile compulsion order.[9] The District Court (or High Court in respect of an adult) may make the order if: • the suspect has refused to provide a sample by consent; • there is good cause to suspect that the person has committed the offence; • a crime scene sample is available for analysis;[10] • there are reasonable grounds to believe that analysis of the suspect sample would tend to confirm or disprove the person's involvement in the

1 Police has advised that a process is under way to amend the Criminal Investigations (Bodily Samples) Act 1995 to reflect the change to the age of a young person who is covered by the youth justice system under the Oranga Tamariki Act 1989. It is intended that this change will occur on 1 July 2019. Pursuant to those changes, "young person" will include a person of or over the age of 14 years but under the age of 18 years.

2 The Courts Matters Act 2018 now permits either Court to deal with applications for suspect compulsion orders although applications for juvenile compulsion orders will only be able to be made in the District Court (which includes the Youth Court).

3 Criminal Investigations (Bodily Samples) Act 1995, s 5. Section 5(a) states that the offence must be an "imprisonable offence or an offence against any of the provisions listed in Part 3 of the Schedule". The only non-imprisonable offence in Part 3 of the Schedule, however, is peeping and peering. For further discussion, see Chapter 4.

4 Criminal Investigations (Bodily Samples) Act 1995, ss 2 and 5. Section 2 states that suspect "means any person whom it is believed has or may have committed that offence, whether or not … there is good cause to suspect that person of having committed that offence".

5 Criminal Investigations (Bodily Samples) Act 1995, s 6(1).

			commission of the offence; and • in all the circumstances, it is reasonable to make the order. The Court must also have regard to the nature and seriousness of the offence, any reasons given for opposing the order, any evidence regarding the importance of the proposed DNA analysis to the investigation, whether the person has offered to provide an alternative bodily specimen (for example, hair) and whether a DNA profile was able to be obtained from that specimen, the age of the suspect (if that person is a young person) and any other matter the Judge considers relevant.
Child (very serious offence)	Not an option.[11]	Not applicable.	The same criteria for a juvenile compulsion order described above apply.[12] In addition, the offence must be one that the child can be prosecuted for.[13] That is: • murder or manslaughter, if the child is 10 years old or older; • punishable by 14 years' imprisonment or more, if the child is 12 years old or older; • punishable by 10 years' imprisonment or more, if the child is 12 years old or older and a previous offender.
Child (less serious offence)	The same criteria for requesting a sample for consent for an adult or young person apply, except:[14] • the offence must be one that the child cannot be prosecuted	The constable must provide the child and their parent with a notice in the prescribed form, oral advice on certain matters and the opportunity to take legal advice.[15] Both must	Not an option.

6 Criminal Investigations (Bodily Samples) Act 1995, ss 6(2) and (7). We discuss the notice requirements further at [8.11].

7 Criminal Investigations (Bodily Samples) Act 1995, s 9.

8 Criminal Investigations (Bodily Samples) Act 1995, s 8(2).

9 Criminal Investigations (Bodily Samples) Act 1995, ss 16 (adults) and 23 (young persons). In respect of a young person, a judge shall appoint a lawyer to represent the young person in the proceedings under section 21 if the young person does not already have legal representation.

10 For a discussion of the exact wording of this criterion, see Chapter 5.

11 Criminal Investigations (Bodily Samples) Act 1995, s 8(1).

12 Criminal Investigations (Bodily Samples) Act 1995, s 23; and the Oranga Tamariki Act 1989, s 272.

13 Criminal Investigations (Bodily Samples) Act 1995, s 23(1)(b).

14 Criminal Investigations (Bodily Samples) Act 1995, s 24D.

15 Criminal Investigations (Bodily Samples) Act 1995, ss 24E and F.

	for; and • the child must be a person for whom an application for a declaration for care or protection may be made under the Oranga Tamariki Act 1989 if the child's involvement tends to be confirmed by the analysis of the suspect sample.	consent before a sample may be taken.[16] Their consent must be recorded in writing or on video.[17] The sample can only be taken as a mouth swab.[18]	

The prescribed oral advice and written notice

8.11 As indicated in Table 1, when a police officer asks an adult or a young person to provide a suspect sample by consent, the officer must orally inform the person "in a manner and in language that the suspect is likely to understand" of a number of things, including the offence the person is suspected of committing and that:[19]

(a) they are not obliged to give a sample;

(b) they may withdraw their consent before the sample is taken;

(c) they may consult a lawyer before deciding whether to provide a sample;

(d) the sample will be analysed and may provide evidence that may be used in criminal proceedings;

(e) if the suspect does not consent and the police officer has good cause to suspect him or her of committing the offence (or a related offence), the police officer may apply to the District Court (or High Court, in respect of an adult) for an order compelling a sample; and

(f) in the case of a young person, the sample will only be taken if the suspect's parent[20] also consents, which they are under no obligation to do.

8.12 The police officer must also give the suspect (and their parent in the case of a young person)[21] a notice on which he or she must acknowledge their consent.[22] The notice must set out the same matters as those in respect of which the suspect must be orally advised and include:[23]

16 Criminal Investigations (Bodily Samples) Act 1995, s 24C.

17 Criminal Investigations (Bodily Samples) Act 1995, s 24G.

18 Criminal Investigations (Bodily Samples) Act 1995, s 48(1).

19 Criminal Investigations (Bodily Samples) Act 1995, ss 6(2) (for adults) and 8 (for young persons).

20 Criminal Investigations (Bodily Samples) Act 1995, s 2 definition of "parent". "Parent" is defined in relation to a person under 17 years to include parent, guardian, a step-parent sharing responsibility for day-to-day care with a parent or a person acting in place of a parent if no parent or guardian can be found.

21 Criminal Investigations (Bodily Samples) Act 1995, s 8(2)(a). A police officer must take all reasonable steps to ensure a copy of the notice is handed to the parent of the young person.

22 Criminal Investigations (Bodily Samples) Act 1995, s 9. A person also may consent orally and in a video recording, in which case, the recording must show the request being made to the person, and the person being handed the notice and giving consent. In the case of a young person, it must also show the parent being handed the notice or acknowledging receipt and consenting to a sample being taken from the suspect.

23 Criminal Investigations (Bodily Samples) Act 1995, ss 7(b) (for adults) and s 8(2)(c) for additional matters for young persons.

(a) the procedures for taking and analysing the sample and disclosing the results;

(b) that a lawyer and/or certain other people may be present when the sample is taken;

(c) that, if they do not consent within 48 hours, it will be deemed a refusal;

(d) that New Zealand Police will retain the sample and analysis unless/until they are required to destroy them (and what those circumstances are); and

(e) That, if the person is convicted of the offence (or a related offence), their DNA profile will be added to the known person databank; and

(f) in the case of a young person, that the suspect's parent or caregiver may consult a lawyer, withdraw their consent and be present during the taking of the sample.

8.13 If the suspect is a child and Part 2A of the Act applies, there are different rules around what the suspect and their parent or caregiver must be told prior to giving a sample by consent.[24]

Physically obtaining a suspect sample

8.14 If the police officer has a mandate to obtain a suspect sample (by virtue of either consent or a compulsion order), the officer must follow the strict procedures around physically taking the sample that are set out in Part 4 of the CIBS Act.

8.15 Part 4 sets out the ways in which a suspect sample can be obtained. Suspect samples can be obtained by:[25]

(a) fingerprick sample taken by a suitably qualified person;[26] or

(b) venous sample (using a syringe to extract blood from a vein) taken by a suitably qualified person; or

(c) a buccal (mouth) swab, which may be done either by:

(i) a suitably qualified person; or

(ii) the suspect themselves; or

(iii) an independent adult (if it is a young person) under the supervision of a police officer.[27]

8.16 The Act provides that a suspect is entitled to have a lawyer and (if the suspect is a young person) a parent or a person having their care present during any of these procedures.[28] Suspects also need to be afforded reasonable privacy during the process.[29]

8.17 In most instances, the suspect gets to decide which of the methods is used.[30] There are two exceptions. A compulsion order may state that a particular method must be used, and if a suspect refuses to comply with a compulsion order and an officer decides that

24 Criminal Investigations (Bodily Samples) Act 1995, ss 24D and E. The information and the content of the notice is broadly the same as consent samples from young persons (so omitting the information regarding the possibility of Police compelling a sample and the consequences that flow from that).

25 Criminal Investigations (Bodily Samples) Act 1995, s 48.

26 Criminal Investigations (Bodily Samples) Act 1995, s 2 definition of "suitably qualified person": a medical practitioner or (in relation to blood samples) a nurse, a medical technologist or a person trained in phlebotomy or (in relation to buccal samples) any of the last three professionals if they have specific training in buccal sampling.

27 Criminal Investigations (Bodily Samples) Act 1995, s 49A.

28 Criminal Investigations (Bodily Samples) Act 1995, s 50.

29 Criminal Investigations (Bodily Samples) Act 1995, ss 52–53.

30 Criminal Investigations (Bodily Samples) Act 1995, ss 48(3) and (7).

reasonable force is required, the fingerprick method must be used.[31] If reasonable force is used, the police officer must provide a written report to the Commissioner of Police within three days.[32]

8.18 Once the sample is taken, the police officer must offer the suspect the opportunity to have a second sample taken, which the suspect may then arrange to be independently analysed.[33]

CURRENT PRACTICE – SUSPECTS

8.19 In this section, we set out the available data to show how often Police use the suspect regime. The data we draw on is Police annual reports and additional information provided by Police.

8.20 Section 76 of the CIBS Act contains Police's reporting obligations.[34] The reporting year runs from 1 July to 30 June. One of the requirements is to report certain figures annually concerning compulsion orders, and under this category, Police report on the numbers of suspect compulsion and juvenile compulsion orders.[35]

8.21 Police has also provided us with figures concerning suspect samples obtained by consent during the 2010–2018 reporting periods. Table 2 provides a general picture of how the suspect sampling regimes in Parts 2 and 2A of the Act have been used in the last 10 years.

Table 2: Suspect sampling under Parts 2 and 2A

REPORTING YEAR	2007–2008	2008–2009	2009–2010	2010–2011	2011–2012	2012–2013	2013–2014	2014–2015	2015–2016	2016–2017	2017–2018
Suspect samples by consent – Part 2 (adult and young person)[36]	N/A	N/A	N/A	341	623	545	585	737	730	656	642
Suspect samples by consent – Part 2A (child)[37]	0	1	0	0	0	0	3	2	6	0	8

31 The very rare exception to this would be if a Judge issued a compulsion order that stated that, for health reasons, the sample must be taken as a buccal sample (Criminal Investigations (Bodily Samples) Act 1995, ss 24A and 48(5)(b)(i)). This may occur if a person is a haemophiliac. We are not aware of any instances where a mouth sample has been taken by force.

32 Criminal Investigations (Bodily Samples) Act 1995, ss 54(2) and (4).

33 Criminal Investigations (Bodily Samples) Act 1995, ss 55, 56 and 56A. If it is a venous sample, the original sample would be divided in two instead under s 55(2)(a).

34 This obligation rests with the Commissioner of Police. The information set out in section 76 of the Criminal Investigations (Bodily Samples) Act 1995 is to be included in Police's Annual Report to Parliament.

35 Pursuant to section 76(1)(b) of the Criminal Investigations (Bodily Samples) Act 1995, Police is to report on "the number of applications for compulsion orders, with the number of each type of compulsion order stated separately". Police began to report on juvenile compulsion orders under this category in the 2007-2008 year: New Zealand Police *2007-2008 Annual Report* (October 2008) at 80.

36 Police is not required to report on suspect samples obtained by consent. This information was provided separately by Police.

37 Criminal Investigations (Bodily Samples) Act 1995, s 76(1)(ea).

Juvenile compulsion orders (all orders granted and none refused)[38]	41	61	16	16	1	0	2	6	1	0	3[39]
Suspect compulsion orders sought[40]	124	160	66	59	50	43	50	76	72	78	59
Suspect compulsion orders granted[41]	124	140	60	59	44	36	43	52	56	59	46[42]
Suspect compulsion orders refused[43]	0	4	0	0	0	1	1	1	0	2	1
Blood samples (venous and fingerprick) taken pursuant to a suspect or juvenile compulsion order[44]	4	1	0	1	0	5	0	1	3	1	1
Buccal samples taken pursuant to a suspect or juvenile compulsion order[45]	61	46	44	46	55	59	62	59	59	64	70
Reasonable force used to obtain either a suspect sample or a databank sample pursuant to a compulsion order or notice[46]	1	1	1	2	1	1	1	0	1	0	0

38 Criminal Investigations (Bodily Samples) Act 1995, ss 76(1)(b)and (c).

39 New Zealand Police *Annual Report 2017-2018* (October 2018) at 146. S76(1)(b) and (c). Three were applied for but only one was granted, as two were withdrawn or discontinued.

40 Criminal Investigations (Bodily Samples) Act 1995, s 76(1)(b).

41 Criminal Investigations (Bodily Samples) Act 1995, s 76(1)(c).

42 New Zealand Police *Annual Report 2017-2018* (October 2018) at 146. Twelve suspect compulsion orders were outstanding, withdrawn or discontinued.

43 In some years, there is a discrepancy between the number of suspect compulsion orders granted when taking into account the numbers sought and refused. We infer that this is likely due to some applications being withdrawn or discounted. For instance, regarding the numbers of suspect compulsion orders granted in the 2016-2017 year, Police reported that 17 applications for suspect compulsion orders were withdrawn or discontinued that year: New Zealand Police *Annual Report 2016-2017* (November 2017) at 141.

44 Criminal Investigations (Bodily Samples) Act 1995, s 76(1)(ca). The section requires the reporting of the number of times a blood sample is taken pursuant to a compulsion order. Police began reporting on juvenile compulsion orders in the 2007-2008 year.

45 Criminal Investigations (Bodily Samples) Act 1995, s 76(1)(cb). The section requires the reporting of the number of times a buccal sample is taken pursuant to a compulsion order. Police began reporting on juvenile compulsion orders in the 2007-2008 year.

46 Criminal Investigations (Bodily Samples) Act 1995, s 76(1)(e). This section requires Police to report on the combined total for any use of reasonable force pursuant to compulsion orders under Part 2 (including juvenile compulsion and suspect compulsion orders) and databank compulsion notices under Part 3. Therefore, it is not possible to separate out the Part 2 figures. For a period of six years between the 2003 changes to the Act and the 2009 changes, these were reported separately. Over that period, Police annual reports show that reasonable force was used pursuant to a Part 2 compulsion order to obtain a buccal sample in 2004-2005 and a fingerprick sample in 2008-2009 and 2009-2010: New Zealand Police *Annual Report* (October 2005) at 8; New Zealand Police *2008-2009 Annual Report* (October 2009) at 77; and New Zealand Police *2009-2010 Annual Report* (October 2010) at 89.

8.22 There are several points worth noting about this data, the implications of which we go on to discuss later in this chapter:

(a) Part 2A (suspect sampling by consent) has only been used 22 times in total since Part 2A was inserted in 2003. Eight of these times were in the last reporting year 2017–2018.[47]

(b) There was a sharp decline in applications for juvenile compulsion orders and suspect compulsion orders from 2009–2010 onwards when Part 2B of the Act came into effect.[48] We discuss the relationship between these two Parts below.

(c) Buccal (mouth) swabbing is by far the most common method used to obtain a suspect sample. The reports do not distinguish between fingerprick and venous samples, but we understand from Police that venous samples are virtually never taken.

(d) It is rare for Police to use reasonable force to obtain a suspect sample. It is worth highlighting that Table 2 also includes databank samples that were taken by force under Part 3.[49]

NON-SUSPECTS/ELIMINATION SAMPLES

The relevance of Part 2 of the CIBS Act

8.23 An elimination sample is a reference sample that is obtained in relation to a particular case from a person who is not considered to be a suspect. This may be a victim or a third party (for example, the victim's partner).[50]

8.24 Until 2011, Police used the consent procedure in Part 2 of the CIBS Act to obtain elimination samples as well as suspect samples. Police used this Part on the basis that it contains considerable procedural safeguards and enables analysis to "prove or *disprove* the suspect's involvement in the commission of the offence" (emphasis added).[51] However, Police has advised that the reference to "suspect" in the associated prescribed notices sat uncomfortably with many victims and other non-suspects. Therefore, Police developed an alternative – non-legislative – process for obtaining elimination samples by consent. This is outlined in the Police Manual.

47 Police advise these eight applications comprised one application in respect of a murder, one for wounding with intent, four for aggravated robbery, one for burglary and one for unlawfully taking a motor vehicle. We are uncertain why a sample was obtained under Part 2A for murder, as Part 2A does not apply to prosecutable offences. It is possible that the child was under the age of 10 years old – the age at which a child can be prosecuted for murder: New Zealand Police *Annual Report 2017-2018* (October 2018) at 147.

48 Part 2B enabled a police officer to require a sample from someone aged 14 years and over upon arrest/intention to charge.

49 We discuss using reasonable force to obtain samples under Part 2B in Chapter 11.

50 Elimination samples are also obtained from investigators in relation to specific cases. These are compared to the Criminal Investigators Elimination Database that is maintained by Police (established under the Policing Act 2008). We discuss this database further in Chapter 10. Police also obtain elimination samples in a number of other situations that are not covered by the Criminal Investigations (Bodily Samples) Act 1995, for instance, from a relative of a missing person, or for the purposes of identifying victims of disasters. See Chapter 10 for further discussion.

51 Criminal Investigations (Bodily Samples) Act 1995, s 6.

Current practice – Police's elimination sampling process and form

8.25 The Police Manual provides that elimination samples may only be taken from people "who are in no way suspected of the offence. They are not governed by the Criminal Investigations (Bodily Samples) Act 1995". The Police Manual specifies that samples are obtained when "there is a need to separate the donor's DNA from other DNA in a crime sample" or there is a possibility of "inadvertent cross-contamination". It further states that the samples are only to be used "for the particular investigation for which they were taken" and are not taken to obtain a DNA profile for inclusion on the known person databank.[52]

8.26 Significantly, if a person is even marginally under suspicion, the Police Manual makes it plain that Part 2 of the CIBS Act should be used. This is reinforced by Police's elimination sampling form, which was updated in 2017. It states:[53]

> MUST NOT BE USED FOR ANY PERSON WHO IN THE CIRCUMSTANCES COULD BE AN OFFENDER (If in any doubt, take a suspect sample according to Part 2 CIBS Act)

8.27 Police provide this form to any person giving an elimination sample (which is only ever done by mouth swab). The form is used to record the person's consent and the consent of their parent if they are a young person.

8.28 The form identifies the offence that is under investigation and explains that: "Analysis of the sample is for elimination purposes only and will be used in connection with this investigation only." It then sets out the person's rights. The form explains that the person does not need to provide consent, may consult a lawyer and may withdraw consent at any time. It further states that the sample will be analysed on behalf of Police and that the resultant information will be held by Police and may be used in the investigation. It further states that the sample and the information derived from it will be destroyed when no longer required.

8.29 The form does not refer to specific retention periods, but the Institute of Environmental Science and Research (ESR) has advised us that it deals with, and retains, elimination samples (and any resultant DNA profile) in the same way and for the same length of time as suspect samples and profiles. We discuss retention in Chapter 14.

ISSUES – SUSPECT AND ELIMINATION SAMPLES

8.30 We have identified the following main issues with the regimes that govern the direct collection of suspect and elimination samples:

(a) The overlap between Part 2 and Part 2B: Is there sufficient clarity around when a police officer should use Part 2 or Part 2B to obtain a biological sample from a suspect?

(b) The physical collection process and the intrusion on bodily integrity/te tapu o te tangata: Could this be made less intrusive and more tikanga compliant? Would this simplify the Act?

(c) Consent: Is it appropriate to obtain suspect samples by consent? Is informed consent possible in these circumstances? Is the answer different for young persons or child suspects? Informed consent is at the heart of the tikanga-based processes used for

52 Police Manual *DNA Sampling* at 46.

53 New Zealand Police *DNA Elimination Sample Consent Form* (DNA 300-08/17).

collection of biological materials in the health sector.[54] If meaningful consent is not possible, what impact might that have on tikanga-based processes?

(d) Elimination sampling: Should this be governed by statute? If so what rules should apply?

(e) Threshold levels: What should the threshold be for suspect and elimination sampling?

(f) Mass screening: This is when Police seek samples from a large group of people. Is this suspect sampling, elimination sampling or something else?

We discuss each of these below.

THE OVERLAP BETWEEN PART 2 AND PART 2B

8.31 If a police officer is actively investigating a person for suspected criminal offending, the question may arise whether to obtain a biological sample under Part 2 of the Act (as a suspect sample) or Part 2B (as a sample for the Temporary Databank). If the officer wants to obtain the sample solely for evidential reasons (that is, just in relation to the case they are investigating/casework), the Police Manual states that Part 2 should be used.[55] If the officer wants to obtain the sample solely for intelligence purposes (that is, just for uploading to the Temporary Databank to check against profiles from unsolved past or future cases), the Manual states that Part 2B should be used.[56] If, however, the officer wants to obtain the sample for both casework and databank purposes, the situation is less clear.

8.32 Generally speaking, a sample obtained for intelligence purposes (and the results of comparing the resultant DNA profile with profiles on the Crime Sample Databank (CSD) – the "link report") cannot be used as an evidential sample. It is not admissible in Court.[57] Instead, a further reference sample needs to obtained (a suspect sample under Part 2) from the person identified in the link report in order to verify its findings.[58] Once a further sample is obtained, ESR can conduct a direct forensic comparison between the profile from the crime scene sample and the profile from the reference/suspect sample in order to verify (or otherwise) the link report findings. The results of that subsequent comparison may then be admissible.

8.33 Instead of always having to obtain two separate samples, the Police Manual advises that one option is for a police officer to ask a person to instead provide a "dual sample" under Parts 2 (the suspect regime) and 3 (the DNA Profile Databank (DPD) regime) by consent.[59] The DNA profile generated from such a sample can be used under Part 2 as evidence and under Part 3 as intelligence. This request, however, could be refused by the person, leaving only the possibility of applying for a suspect compulsion order under Part 2.

54 See discussion of *Te Ara Tika* in Chapters 12 and 14.

55 Police Manual *DNA Sampling* at 7–8.

56 Police Manual *DNA Sampling* at 7.

57 The Criminal Investigations (Bodily Samples) Act 1995, s 71. The exception to this is if a link report does not identify the defendant - then it may be admissible (for instance, if the purpose of producing the link report in a trial is to identify a crime scene sample as belonging to the victim).

58 Unless an application is made under section 71A of the Criminal Investigations (Bodily Samples) Act 1995. See discussion at [8.40].

59 Criminal Investigations (Bodily Samples) Act 1995, s 33 and Police Manual *DNA Sampling* at 34.

8.34 The alternative option – if there is already sufficient evidence in the case to charge the person with the offence – is that the officer could require the person to provide a sample for the Temporary Databank under Part 2B. It is obvious why this option might be preferred. There is no question of consent, no need for court involvement and no need to locate the person at a later date to execute a court order. The profile can be used for intelligence purposes, and if the person is ultimately convicted, the profile will automatically be transferred to the DPD.

8.35 Most importantly, the sample obtained under Part 2B can also be used for investigative purposes in the active case. The CIBS Act specifically states that this is permissible.[60] The DNA profile generated from the Part 2B sample and a DNA profile from the crime scene sample just need to be uploaded onto the Temporary Databank and the CSD.[61]

8.36 Ultimately, a police officer may still need to apply for a Part 2 suspect compulsion order in order to use any evidence of a match between the two DNA profiles in court,[62] but in the meantime, the charge might have been resolved, for example, through a guilty plea. In any event, the process of obtaining a suspect compulsion order would be very straight-forward if a link report showing a match between the Part 2B known person profile and a crime scene profile already existed.[63]

The data

8.37 The data tends to suggest that, since Part 2B was inserted into the CIBS Act, the suspect regime in Part 2 has become increasingly redundant.

8.38 First, as noted above, there was a sharp decline in the number of suspect and juvenile compulsion order applications from more than 160 in the two years preceding 2010 to between 43 and 82 applications annually after 2010. In comparison, the number of suspects providing samples by consent is still relatively high (between 545 and 737 samples in the last seven years).[64] These trends may be linked to judicial comments that suspect and juvenile compulsion orders are now rarely opposed as the applications are usually always supported by link reports indicating a match between the CSD and the known person databank.[65] If suspects have already provided samples under Part 2B or as a databank consent sample under Part 3 of the CIBS Act, they may see little point in opposing an application for a compulsion order or in refusing to simply provide a further sample by consent.

8.39 Second, since 2010, there have been between 50 and 81 cases each year in which there was a match between the Temporary Databank and the CSD where the matching databank and crime scene samples were both obtained in the same case.[66] The use of

60 Criminal Investigations (Bodily Samples) Act 1995, s 24R(1)(a).

61 This is ESR's policy, in accordance with section 24R(1)(a) of the Criminal Investigations (Bodily Samples) Act 1995.

62 Section 71 of the Criminal Investigations (Bodily Samples) Act 1995 contains the general rule that information obtained under Part 2B is not admissible in criminal proceedings.

63 In this context, link reports are the results of forensic comparison conducted by ESR in comparing a crime scene sample to a databank containing profiles from known people. The reports are considered "intelligence leads".

64 In the 2010-2011 year, only 341 samples were obtained. This appears to be more of an outlier.

65 *Police v Manu* HC Blenheim CRI-2011-406-19, 5 December 2011 at [1].

66 These matches are reported under s 76(1)(ee) of the Criminal Investigations (Bodily Samples) Act 1995. The exact figures were 73 (2010–2011), 81 (2011–2012), 50 (2012–2013), 62 (2013–2014), 69 (2014–2015), 75 (2015–2016), 72 (2016–2017) and 54 (2017–2018).

the Temporary Databank in this way directly undermines Part 2, as it side-steps the involvement of the court.

8.40 Third, section 71A of the CIBS Act empowers a police officer to apply to the District Court to use a databank sample that has been obtained under Part 2B as an "evidential sample". In effect, it is used as a suspect sample. The application must be made before the sample has been analysed, and it can be made without notice to the person concerned. In the application, the officer must set out their reasons for believing that analysis of the sample would tend to confirm or disprove the person's involvement in the commission of the offence. Again, this directly undermines Part 2. Unlike a suspect or juvenile compulsion order, under section 71A, the suspect has no opportunity to consent, cannot contest the application and will have undergone the physical sampling process before the court even hears the application. Furthermore, unlike Part 2, section 71A does not contain extensive statutory requirements that the judge must consider.

8.41 Police has not produced any guidelines on the use of section 71A or the circumstances in which applications might be made under this section. Police advises that, in accordance with its general operational guidelines, a Part 2B sample should not be obtained if a person already has a profile on the Temporary Databank or the DPD. However, there is uncertainty as to whether a sample could be obtained from a person in this situation if the intent of doing so was to make an application under section 71A (that is, to enable a Part 2B sample to be used as an evidential sample). Police further advise that this practice has been discouraged, meaning that section 71A is rarely used.

Options for reform

8.42 In light of these observations, we consider that new legislation needs to clarify the relationship between any new suspect sampling regime and any new DNA profile databank regime. In our view, the best way to do this would be to clarify the rules around the DNA profile databanks – specifically the collection criteria for the known person databank. We explore various options for reforming the procedures for obtaining databank samples from suspects in Chapter 11.

8.43 One option to consider is adopting the model used in Canada, Ireland and many jurisdictions in Australia of having a DNA database system containing multiple indices. This could include a suspect profile index, a crime scene profile index and a convicted offender profile index.[67] These models have strict rules for permissible matching between the indices. This could limit matching between the suspect and the crime scene indices so that profiles can only be matched within specific cases, or the indices could be compared more broadly. As we explain in Chapter 11, this model would resolve any confusion as to whether to use the suspect regime or the Temporary Databank regime, as there would only be one procedure for obtaining a sample from a suspect. This procedure would be designed to deal primarily with casework, with any additional intelligence uses being a secondary consideration.

8.44 Regardless of the policy decisions made on how suspect DNA profiles should be used, the procedure for obtaining suspect samples also needs to be reviewed and reformed due to a number of issues in the current process with physical collection and consent.

[67] See Table 1 in Chapter 4.

THE PHYSICAL COLLECTION PROCESS

Sampling methods

8.45 When Part 2 of the CIBS Act originally came into force, it only permitted blood samples to be taken from suspects. The very detailed procedural rules governing the process for obtaining consent are still in the Act. If the suspect refused, only the High Court had jurisdiction to issue a suspect or juvenile compulsion order, and such an order was only available in relation to specified serious sexual or violent offences. The sample itself could only be taken by a medical practitioner or, if the suspect consented, a registered nurse.

8.46 These restrictions and procedural safeguards recognised that the power in the CIBS Act to compel a suspect to provide a blood sample, by force if necessary, was unprecedented in New Zealand.[68] As a point of comparison, under drink driving laws, police officers have never been able to obtain a breath or blood sample by force.[69]

8.47 When the option of buccal (mouth) sampling was introduced in 2003, the Government described it as "obviously less intrusive" and noted that it would "eliminate the cost of having a medically qualified person to perform the task".[70]

8.48 Putting the intrusion on informational privacy to one side, we agree that buccal sampling is much less physically intrusive than blood sampling. However, buccal sampling still involves a search *within* the body of a person, so bodily integrity is still an issue in a way that it is not when police officers fingerprint or photograph a person. In addition, as was raised by the (then) Minister of Justice in Parliamentary debate, buccal sampling involves taking a sample from the mouth, which is part of a person's head – a part of the body that is considered particularly tapu in tikanga Māori.[71]

8.49 We understand that it may be possible to obtain reference samples by applying tape to the back of a person's hand and analysing the skin cells that attach to the tape (the tape option). Alternatively, it might be possible to analyse the skin cells left behind on the fingerprint scanner following a police officer fingerprinting a person (the fingerprint option). These developments are the result of the increasing sensitivity of DNA analysis kits. The main benefit of these options is that they would not intrude into the person's body or target their head. This would lessen the intrusions on bodily integrity and tikanga. We are, however, aware that both options raise their own issues and require further thinking.

8.50 We acknowledge that combining the process of fingerprinting with obtaining a biological sample from the fingerprint would be efficient in terms of time and cost, but as explained elsewhere in this paper, we consider biological sampling to be much more intrusive than fingerprinting, given the amount of personal information that can be generated from DNA. Therefore, we are firmly of the view that they should remain distinct processes.

8.51 A further difficulty with obtaining DNA reference samples using either fingerprint or tape is the likelihood of contamination. Unlike blood samples or samples obtained from a

68 Law Commission "Submission to the Justice and Law Reform Committee on the Criminal Investigations (Blood Samples) Bill 1994."

69 See the Transport Act 1962, ss 59B–59C (now repealed); and the Land Transport Act 1998, ss 68-73.

70 Phil Goff (then Minister of Justice) made these comments during the Second Reading of the Criminal Investigations (Bodily Samples) Amendment Bill: (21 October 2003) 612 NZPD 9444.

71 (21 October 2003) 612 NZPD 9444; Hirini Moko Mead *Tikanga Māori: Living by Māori Values* (revised ed, Huia Publishers, Wellington, 2016) at 53.

person's mouth, a sample taken from someone's hand is much more likely to be contaminated by a second person's DNA. The two people may have touched or the DNA may have been transferred from one person to another via an item. This could be alleviated to some extent by cleaning the person's hand, but such cleaning is unlikely to be effective enough to make these options truly viable from a scientific perspective.

8.52 In light of these observations, it appears that buccal sampling is the least physically intrusive method for biological sampling with the greatest chance of obtaining a viable sample. Given that buccal sampling is already used to obtain all elimination samples and the vast majority of suspect samples, we question whether it is still necessary to include the options of fingerprick and venous sampling in new legislation. Not including these sampling methods in new legislation would reduce the level of physical intrusion permissible by the State, and it would also simplify the Act. Having one sampling method instead of three would require fewer variations in procedure, and the requirements to have medical practitioners involved could potentially be removed.[72] However, this will depend in part on what policy decisions are made around reasonable force, as such samples are currently only obtained by fingerprick sampling.

8.53 We also note that, in exceptionally rare cases, a person may have different DNA profiles in different parts of their body due to blood transfusions, transplants or a natural mutation known as "genetic chimerism".[73] In such cases, Police and ESR may need to verify a DNA profile obtained by buccal swabbing by obtaining a blood sample. New legislation could potentially address this issue by making fingerprick or venous sampling available upon application to the court if there is a scientific need for a different sample. This possibility, however, is so rare that it would not require the alternative options to be available in every case.

Reasonable force

8.54 The use of reasonable force to compel a suspect to provide a biological sample has always been controversial.[74] In addition to the concerns around physical intrusion discussed above, it is a forcible and grave intrusion on te tapu o te tangata and informational privacy.

8.55 We are considering whether an alternative might be available, such as making it an offence to refuse to comply with a suspect or juvenile compulsion order. This is how the same issue is dealt with under the Land Transport Act in the context of obtaining breath and blood samples under drink driving laws.[75]

8.56 Another alternative would be allowing the court to draw an adverse inference from a suspect's refusal to comply. Section 70(1) of the CIBS Act already allows for an adverse

72 In relation to buccal sampling, the definition of "suitably qualified person" in section 2 of the Act enables a person to undergo specialist training in taking and dealing with buccal samples.

73 See generally Yi Zhou and others "DNA profiling in blood, buccal swabs and hair follicles of patients after allogeneic peripheral blood stem cells transplantation" (2011) 13 Legal Medicine 47; Eileen Wu and others "Chimerism detected in fraternal twins using ABI AmpFISTR Identifiler" (2009) 2 Forensic Sci Int Genet Supplement Series 226; Vincent Castella, Maria del Mar Lesta and Patrice Mangin "One person with two DNA profiles: a(nother) case of mosaicism or chimerism" (2009) 123 Int J Legal Med 427; and Cecilia Miozzo and others "A case of chimerism in a paternity study" (2009) 2 Forensic Sci Int Genet Supplement Series 228.

74 For a discussion of the debate around the power to use reasonable force in the Criminal Investigations (Bodily Samples) Act 1995, see Nessa Lynch and Liz Campbell *The Collection and Retention of DNA from Suspects in New Zealand* (Victoria University Press, Wellington, 2015) at 87–90 and 100–105.

75 Land Transport Act 1998, s 60.

inference to be drawn from a suspect's refusal to provide a compelled sample.[76] This provision can be used instead of obtaining the sample using reasonable force. For evidence of the suspect's refusal to be admissible at trial, however, the judge must find that the probative value of that evidence outweighs its "prejudicial effect".[77] Further, the judge may tell the jury that there may be good reasons for the suspect to have refused. There are no reported cases of this provision being used.

8.57 Our concern with these alternatives is that, if there was no option of being able to use reasonable force as a "back-up" or alternative option, depending on the offence under investigation, the legislation could incentivise refusal to comply with compulsion orders. For example, a suspect who knows that their sample will implicate them may well choose to be charged with failing to comply with the order and to risk an adverse inference being drawn at trial. However, this would undermine the presumption of innocence. There may be a multitude of reasons why a person may refuse to provide a suspect sample.

8.58 For drink driving offences, the situation is different. Unlike in most criminal offences where DNA evidence will form only a part of the evidence, for drink driving offences, there may be no other evidence of the offence. The maximum penalty for an excess blood alcohol offence is the same as the maximum penalty for refusing to provide a breath or blood sample upon request.[78] This can be justified because the degree of criminality involved in both offences is fairly similar and the maximum penalties are relatively low (three months' imprisonment and a fine of $4,000 for a first or second offence).

8.59 A possible third alternative would be to combine making it an offence to refuse to comply with the compulsion order with a power for police officers to collect the sample by indirect means, for example, by seizing an item belonging to the suspect, such as a drink bottle. We discuss indirect sampling methods in Chapter 9. Our concern with this option is that it may not be very practical and could raise significant issues with informational privacy and tikanga.

8.60 If the power to obtain a compelled suspect sample by force is retained in new legislation, we consider that the tight restrictions in Part 2 of the CIBS Act should continue to apply. Currently, force can only be used after a judge has independently determined that the criteria for obtaining a suspect sample have been met. Furthermore, there are internal and external reporting obligations that provide accountability. We note that, with these safeguards in place, only one or two samples are obtained by force under Parts 2 or 3 of the Act each year.

8.61 A related issue is whether the use of force should be permissible for obtaining a sample for the Temporary Databank under Part 2B of the Act. Under that Part, there is no judicial involvement and the sample is not taken to further the investigation into a specific offence. Therefore, different considerations are engaged. We discuss this issue in Chapter 11.

76 We are not aware of any situations where this section has been relied upon.

77 Interestingly, this provision uses the phrase "prejudicial effect" not "unfairly prejudicial effect" - the phrase used in section 8 of the Evidence Act 2006, which contains the general exclusionary rule.

78 Land Transport Act 1998, ss 56 and 60.

Q12 What methods for obtaining a suspect or elimination sample directly from a person should be available in new legislation (that is, venous, fingerprick, buccal (mouth) swab, tape and/or fingerprint) and why?

Q13 Do you think that, if a person refuses to comply with a suspect or juvenile compulsion order, a police officer should be able to use reasonable force to obtain the sample? If so, what legislative safeguards do you think should be in place? If not, what should happen if the person refuses to comply with the order?

CONSENT

8.62 As explained at [8.6] to [8.18], informed consent is a central concept in Part 2 of the CIBS Act. A police officer must attempt to obtain a suspect sample by consent prior to applying for a compulsion order.[79] Further, there are very detailed rules around the information that must be given to a suspect, both verbally and in writing. There are additional protections in the Act if the suspect is a young person or child.

8.63 The Court of Appeal has consistently held that non-compliance with these requirements may amount to an unreasonable search and seizure under section 21 of the New Zealand Bill of Rights Act 1990 (NZBORA).[80] In emphasising the importance of compliance with the Act, the Court stated in a 2017 decision:[81]

> Parliament has provided a comprehensive and prescriptive regime for obtaining a person's informed consent… Its mandate of scrupulous compliance recognises the substantial intrusion into an individual's privacy inherent in exercising the power.

8.64 Despite this strict regime, we are concerned that suspects may not always be in a position to provide "free and informed consent".[82] The three main reasons for this are:

(a) the inherent power imbalance between the suspect and the requesting officer;

(b) the complexity and volume of information that needs to be provided to the suspect; and

(c) the difficulty of obtaining appropriate legal advice.

8.65 We have additional concerns about the capacity of children and young persons (who are suspects) to provide informed consent. We note that different issues arise in relation to elimination samples. We discuss each of these matters in turn below.

79 Except if the suspect is a child who may be prosecuted for the offending.

80 *R v Shaheed* [2002] 2 NZLR 377 (CA) at [6], [166]–[167] and [194]; *R v T* [1999] 2 NZLR 602 (CA) at 613–614; and *R v Hoare* CA310/04, 21 April 2005 at [34]–[42]. Although as *Shaheed* also held, non-compliance may not necessarily lead to exclusion of the evidence under section 30 of the Evidence Act 2006.

81 *R v Toki* [2017] NZCA 513, [2018] 2 NZLR 362 at [15]. This case concerned obtaining a sample for the known person databank by consent under Part 3 of the Criminal Investigations (Bodily Samples) Act 1995. The requirements concerning consent in Part 2 of the Act are mirrored in Part 3.

82 Prior to the Criminal Investigations (Bodily Samples) Act 1995 coming into force, the Court of Appeal held that the common law allowed police officers to obtain suspect samples by consent as long as the consent was obtained "without artifice or deception as to the purpose for which the sample is required, from a person in a position to give free and informed consent": *R v Pengelly* [1992] 1 NZLR 545 (CA) at 549.

The power imbalance

8.66 There is an inherent imbalance of power when a police officer asks a suspect to provide a reference sample by consent. The request is made in the context of a criminal investigation by an officer at a police station to a person who is considered to be a suspect. The Police Manual recognises this potential imbalance, noting that consent "must be given freely and willingly. It will not be valid if it is obtained using inducements (e.g. waiving an infringement notice)".[83] In our view, it is problematic that the CIBS Act requires an officer to inform a suspect, in writing and orally, that, if they refuse to provide a sample by consent, the officer may apply for a compulsion order.[84] This reinforces the power imbalance and significantly undermines the notion of free choice.

8.67 The rules governing informed consent in the CIBS Act were modelled on the Australian state of Victoria's Crimes (Blood Samples) Act 1989.[85] That Act, in turn, seems to have drawn on the concept of informed consent as understood in the health sector, with the "intention of providing a procedural safeguard to protect personal autonomy".[86] Informed consent is at the heart of the tikanga-based processes developed for use in the health sector.[87] Giving consent to collection of a biological sample is the point at which a relationship is developed and safety and comfort is established in tikanga Māori. However, there is some difficulty in taking concepts that are developed in the health context and trying to apply them in the criminal justice context, including these tikanga implications. It is important to note that, in the health context, the aim is "to give subjects of bodily procedures the knowledge and confidence to choose what is best for them".[88] This cannot be said to be the goal of suspect sampling in the criminal context. Commenting on this, the Australian Law Reform Commission noted in 2003:[89]

> 41.6… in virtually all clinical and medical research contexts, an individual's refusal to (or withdrawal of) consent to a procedure is the end of the matter – individual autonomy is given precedence. By way of contrast, in the law enforcement context, an individual's refusal of consent may be readily over-ruled by an AFP [Australian Federal Police] officer exercising a statutory discretion, or by a court.
>
> 41.7 The inherently coercive nature of a criminal investigation also challenges the free nature of any consent given to a forensic procedure. For example, where a suspect consents because he or she believes – correctly or otherwise – that a compulsory procedure will be ordered anyway, this may suggest the consent has not been freely given. Similarly, where a police officer suggests that a suspect should consent to a forensic procedure because this would exclude the person from suspicion, this also undermines the free nature of the consent given.

83 Police Manual *DNA Sampling* at 38.

84 Criminal Investigations (Bodily Samples) Act 1995, ss 6(2)(b)(vii) and 7(b)(viii).

85 (29 November 1994) 545 NZPD 5190. For a discussion of the Victorian Act, see Jeremy Gans "Something to Hide: DNA, Surveillance and Self-Incrimination" (2001) 13 Current Issues Crim Just 168 at 170–171.

86 Australian Law Reform Commission *Essentially Yours: the Protection of Human Genetic Information in Australia* (ALRC R96, 2003) at [41.6]; see also Greg Horton "DNA Fingerprinting: Informed Consent and the Admissibility of Evidence" (1992) 7 Auckland U L Rev 165.

87 Maui Hudson and others *He Tangata Kei Tua: Guidelines for Biobanking with Māori* (Te Mata Hautū Taketake – Māori and Indigenous Governance Centre, Hamilton, October 2016) at 14–18.

88 Jeremy Gans "Much Repented: Consent to DNA Sampling" (2007) 30(3) UNSW Law Journal 579 at 606.

89 Australian Law Reform Commission *Essentially Yours: The Protection of Human Genetic Information in Australia* (ALRC R96, 2003) at 1004–1005.

8.68 Due to these concerns, the Australian Law Reform Commission ultimately recommended in relation to the Crimes Act 1914 (Cth) that suspect samples should not be obtained by consent and that instead they should only be obtained pursuant to a court order or a statutory power exercised by an authorised officer.[90] This recommendation was not acted on by the Australian Government.

8.69 The New South Wales Ombudsman also outlined concerns about the use of informed consent in the context of suspect sampling. In a 2006 report he identified a number of different factors affecting the suspect's decision, including:[91]

- a wish to cooperate with police;
- a desire to show the suspect has nothing to hide;
- the belief that there is no choice about the matter and the procedure will be conducted regardless;
- fear that the police may take a sample by force; and
- the length of time spent in police custody and a desire to be released as soon as possible.

8.70 Ultimately, however, the Ombudsman did not recommend that suspect sampling should be conducted without consent as a matter of course, as that would represent a significant departure from the NSW legislative regime. His report notes:[92]

> Providing information about a proposed forensic procedure and asking for consent gives suspects a sense of control, as they can participate in the decision about whether to permit this invasion in order to assist law enforcement authorities.

8.71 We consider that, while suspect sampling by consent could instil in some suspects a sense of control, albeit an arguably illusory one, the value of retaining this option should be carefully considered,[93] including from a tikanga perspective.

The complexity

8.72 The entire process for obtaining a suspect sample by consent is complicated. First, the police officer must generate the right sampling notice. This is not a straight-forward task. There are four different Parts in the Act under which a sample may be taken (Parts 2, 2A, 2B or 3), different sampling methods (venous, fingerprick and buccal) and four possible age brackets (adult, young person, child (prosecutable) and child (non-prosecutable)). As explained in Chapter 4, in total, 70 possible sampling notices exist, 36 for suspect sampling alone.

8.73 To manage this complexity, Police introduced a computer system called Biotrak in 2010. Biotrak automatically generates the correct sampling notice after an officer enters preliminary information, including the person's age and the relevant Part of the Act. This ensures that the officer uses the right notice but, arguably, it may also have 'routinised' the process, making officers less familiar with the CIBS Act and the notices as they do not

90 Australian Law Reform Commission *Essentially Yours: The Protection of Human Genetic Information in Australia* (ALRC R96, 2003) at 1012.

91 Bruce Barbour *DNA Sampling and other forensic procedures conducted on suspects and volunteers under the Crimes (Forensic Procedures) Act 2000* (NSW Ombudsman, 1 October 2006) at 96.

92 At 98.

93 Jeremy Gans "Something to Hide: DNA, Surveillance and Self-Incrimination" (2001) 13 Current Issues Crim Just 168 at 168.

have to engage directly with the content of the CIBS Act itself in the same way. This may affect their ability to convey the requisite information in an understandable way.

8.74 This problem is not unique to New Zealand. In reviewing the law governing the collection of DNA from suspects in New South Wales, the NSW Standing Committee on Law and Justice noted that the complexity in the legislation made its "implementation … by police officers more difficult, prevents the easy understanding of the provisions by suspects, and potentially could cause legal uncertainty".[94]

8.75 Once the police officer has the right notice, they must give it to the suspect and inform them of the additional oral information. This must be done "in a manner and in a language that the suspect is likely to understand".[95] Again, this is not an easy task. An array of different factors may affect a suspect's level of understanding. They may have an intellectual, mental health or other disability.[96] They may not speak English very well.[97] Notably, 60–70 per cent of the prison population have low levels of literacy.[98] The percentage may be similar in relation to suspects, and if so, comprehension of the notice may be particularly problematic. This has been recognised by some police officers who read the notices to suspects as well.

8.76 Some of these difficulties might be surmountable if the information the suspect was being asked to digest was relatively simple. It is not. The notice contains details about the investigation, an explanation about the ability to give and withdraw consent and to consult a lawyer, an explanation of deemed refusal, advice about the availability of a compulsion order, advice that the sample will be analysed and the results may be used as evidence, a summary of the sampling method options and the persons who may be present in each scenario, an explanation of the procedures governing analysis and disclosure of the results, advice about the retention and destruction of the sample and the analysis results and advice that, if they are convicted, their profile will be transferred to the known person databank.[99]

94 Jeremy Gans "The Quiet Devolution: How the Model Criminal Code Officers' Committee Botched New South Wale's DNA Law" (2002) 14 Current Issues Crim Just 210 at 212, discussing the NSW Standing Committee on Law and Justice's 2002 review.

95 Criminal Investigations (Bodily Samples) Act 1995, s 6(2)(b).

96 This was the case in *R v Te Hau* HC Hamilton CRI 2006-419-169, 15 February 2007. *R v Te Hau* involved a suspect with mental health issues, which raised the concern about his capacity. The High Court relied on the prior knowledge the detective had of the suspect and his capacity and on the fact the suspect had written "no" on the consent form. The Court held this to mean the suspect was sufficiently aware of "his position" and must have understood enough of the contents of the form to refuse. The Court commented that the form was in "readily comprehensible language". Similarly, in *R v Manhire* DC Auckland CRI-2004-004-11271, 7 October 2005, the notice was read to the accused because he could not read well. The Court held that this did not mean "he does not understand English when it is spoken to him". The sample was held to be admissible.

97 This was the case in *R v R* [1999] BCL 652 (CA). The suspect was from Africa, but it was unclear from which country he originated or what language he spoke. The Court considered the evidence that police officers and others had attempted over the preceding weeks to determine what language the suspect spoke, that the suspect had misled people as to his language, that he had been heard to speak English and that he appeared to understand English. The Court therefore concluded that the suspect was likely to have understood when he was informed in English of the requirements in the Criminal Investigations (Bodily Samples) Act 1995. The Court held at [13]–[14] that the phrase "likely to understand" clearly intended an objective assessment and that "The prosecution need not prove what [the suspect] actually understood, but whether, in the circumstances, the language used was such that he was likely to understand it".

98 Jill Bowman "Assessing the Literacy and Numeracy of Prisoners" (2014) 2(1) Practice: The New Zealand Corrections Journal 39 at 40–41; and Marama Edwards and Stephen Cunningham "Supporting Offenders Into Employment – a joint initiative" (2016) 4 Practice: The New Zealand Corrections Journal 42 at 42.

99 Criminal Investigations (Bodily Samples) Act 1995, s 6 and 7. See discussion at [8.11]–[8.13].

8.77 Significantly, the notice does not explain what analysis of the suspect sample will involve (at present, traditional STR profiling of non-coding regions of the genome).[100] It does not explain what the known person databank is, and it does not explain that the known person databank can be used for familial searching, which could implicate a suspect's relatives.[101] All of this additional information could affect a suspect's decision and should arguably be provided in order to obtain informed consent.

8.78 An additional problem is that the Police Manual states that, if a suspect has not previously provided a biological sample for the known person databank, the officer should make a "dual request" under section 33 of the CIBS Act.[102] This involves asking the suspect to consent to their sample being used both for casework and databank purposes. Again, this increases the volume and complexity of the information the suspect must be told. It also conflates the two requests. While we are not entirely comfortable with informed consent to suspect sampling, we consider that there is an even stronger case that it is inappropriate to obtain databank samples by consent, as we discuss in Chapter 11.

Legal advice

8.79 Although suspects are entitled to legal advice prior to consenting to provide a sample, we are not aware of many people seeking it. In part, this may be because there are very few lawyers available who are familiar with the CIBS Act and are civil legal aid providers. This last factor is important because proceedings under the CIBS Act are civil proceedings for the purposes of the Legal Services Act 2000,[103] so only civil legal aid providers could provide advice under the legal aid scheme in this context. There is little cross-over between civil and criminal legal aid providers, and it is the criminal lawyers who are more likely to fully appreciate the broader investigation and prosecution context. Notably, the available pool of lawyers with the requisite expertise may be decreasing, as contested hearings regarding suspect compulsion orders and juvenile compulsion orders are becoming less and less common.

Additional concerns regarding young persons

Ensuring understanding

8.80 As we explained in Chapter 2, legislation needs to be fit for purpose, and as part of that, the CIBS Act (and any replacement legislation) needs to sit comfortably within the wider criminal justice regulatory framework. In that regard, we have particular concerns about how the CIBS Act treats young persons and children.[104]

8.81 All of the problems that we have identified above concerning informed consent are heightened in respect of young persons and children. For instance, international research has shown that one in five young offenders has a learning disability and, compared with those not involved in the criminal justice system, are three times more likely to have

100 See Chapters 3 and 7.

101 Familial searching is the subject of Chapter 13.

102 Police Manual *DNA Sampling* at 34.

103 Criminal Investigations (Bodily Samples) Act 1995, s 67.

104 These concerns are discussed at length in Nessa Lynch and Liz Campbell *The Collection and Retention of DNA from Suspects in New Zealand* (Victoria University Press, Wellington, 2015) at ch 11.

experienced a traumatic head injury.[105] In addition, persistent young offenders have been found to have "neurological abnormalities, volatile temperament, low intellectual ability, reading difficulties and poor performance on neuropsychological testing".[106]

8.82 Within the New Zealand context, 92 per cent of young persons in youth justice residences have difficulties with literacy and numeracy and lower IQ, attention or verbal abilities. In particular, their reading skills are very low – with the mean ability being at the 4th percentile.[107] The rates of substance abuse and mental health disorders are present in at least half of young persons who offend. This may also mean their ability to understand or consent in this context is compromised.[108]

8.83 In addition, young persons and children are particularly vulnerable in criminal investigations. This is recognised by the following youth justice principle in the Oranga Tamariki Act 1989:[109]

> [T]he vulnerability of children and young persons entitles a child or young person to special protection during any investigation relating to the commission or possible commission of an offence by that child or young person.

8.84 Express provisions in the Oranga Tamariki Act set out what is known as "the protective code" that operates for a young person during questioning and investigation by Police.[110] These provisions require police officers to explain various matters to the young person prior to interviewing them. The explanations must be given in age-appropriate language. The courts have interpreted these requirements strictly as requiring police officers to ensure that the young person has understood what they have been told.[111]

8.85 This differs to the CIBS Act, which only requires officers to "inform" the young person of certain matters and to hand them a prescribed notice. Significantly, the notices do not contain language that has been specifically simplified for young persons and children. Instead, the notices are largely the same as the adult notices, with extra information included about the role of parents and caregivers. There is no ability for Police to change the content of these notices without the CIBS Act being amended.

8.86 Even if Police was empowered to simplify the notices, we question whether it would be possible to reframe all of the requisite information into language that could be understood by a person as young as 10 years of age.[112] A 2017 research report has found that the child/young person version of the "rights caution" is not readily understood by children and young persons and may not be effective in providing them with the legal

105 Office of the Prime Minister's Chief Science Advisor "It's never too early, never too late: A discussion paper on preventing youth offending in New Zealand" (June 2018) at [55]–[56] and [58].

106 Office of the Prime Minister's Chief Science Advisor "It's never too early, never too late: A discussion paper on preventing youth offending in New Zealand" (June 2018) at [58].

107 Office of the Prime Minister's Chief Science Advisor "It's never too early, never too late: A discussion paper on preventing youth offending in New Zealand" (June 2018) at [55].

108 Office of the Prime Minister's Chief Science Advisor "It's never too early, never too late: A discussion paper on preventing youth offending in New Zealand" (June 2018) at [53].

109 Oranga Tamariki Act 1989, s 208(h).

110 Oranga Tamariki Act 1989, ss 215–219.

111 *R v Z* [2008] NZCA 246, [2008] 3 NZLR 342 at [35], [39], and [42].

112 A 10-year-old could be asked to provide a reference sample in relation to a non-prosecutable offence under Part 2A of the Criminal Investigations (Bodily Samples) Act 1995.

protection that was intended.[113] The "rights caution" is much less complicated than the information that needs to be provided in the context of suspect sampling.

Protection of parental consent

8.87 A related issue is whether requiring parental consent provides additional protection for a young person who is asked to provide a suspect sample. The CIBS Act does not require the parent to be present at the time the police officer provides the young person with the requisite written and oral information, nor is there any requirement for the parent to have the information explained to them (except in relation to a request for a sample from a child under Part 2A). Consequently, the parent may not be able to help the young person to understand their rights or even be able to properly consent themselves in an informed way.

8.88 Furthermore, overseas research has shown that parents may simply encourage their children to cooperate with police, so the involvement of an independent adult may actually provide more meaningful protection.[114] The quality of a child or young person's relationship with their parent may also play a part. If the relationship is not good, the protective aspect may be undermined.

Options for reform

8.89 We have identified three broad alternative options for reform of suspect samples in relation to adults, children and young persons. First, retain the ability to obtain suspect samples from adults and young persons by way of informed consent but improve the processes. Second, legislate that suspect samples can only be obtained pursuant to a court order in relation to some or all suspects. Third, introduce a contestable notice regime. It is important to consider consistency with the Treaty of Waitangi, and in particular the principle of equity, in assessing reform options along with consistency with NZBORA, privacy and tikanga issues.

Option 1 – Retain informed consent for adults and young persons

8.90 As explained in Chapter 2, one of our main goals in this review is to simplify the CIBS Act and make it more accessible. By making changes elsewhere, the suspect sampling process may become more straight-forward in future legislation. For example, if there were only one or two sampling methods available, less information would need to be included in the notice. Such changes could alleviate some of our concerns about informed consent. Furthermore, we acknowledge that some of the complexity in terms of the information that needs to be provided to the suspect is unavoidable. The suspect would still need to be informed about the sampling process, analysis and retention even if their sample could only be taken by compulsion.

8.91 In deciding whether the option to obtain suspect samples by informed consent should be retained, we are also considering the following measures:

- Preparing a plain English version of the sampling notice and the accompanying oral information to also be provided in te reo Māori and other languages. Versions could

113 Frances Gaston "Young People's Comprehension of the Rights Caution in New Zealand" (Master of Science in Forensic Psychology Thesis, Victoria University of Wellington, 2017) at 3.

114 Nessa Lynch *Youth Justice in New Zealand* (2nd ed, Thomson Reuters, Wellington, 2016) at 105–106.

also be prepared for persons with intellectual or learning disabilities. This may require some loosening of the legislative requirements to enable a degree of flexibility in language. We note that the Biometrics and Forensics Ethics Group in the United Kingdom has been tasked with preparing similar plain English leaflets.[115] A similar oversight body in New Zealand could also perform that task.[116]

- Requiring the officer to have "good cause to suspect" the person of committing the offence before asking them to provide a suspect sample by consent.
- Removing reference from the sampling notice and the required oral advice of the ability to compel a sample (through a suspect or juvenile compulsion order) in lieu of consent.
- Removing the ability to make dual requests to suspects (dual requests enable a person's sample to be used for both casework and databank purposes).
- Enabling criminal legal aid providers to give advice to suspects who are asked to provide samples by consent.
- Requiring officers to video record their request to the suspect for consent and the suspect's response. We are aware that this has been done in some Australian jurisdictions.[117] This would promote best-practice compliance and help to resolve any disputes as to what information the suspect was given and how it was given.
- For young persons, including a requirement that police officers must explain the information to the suspect and their parent or an independent adult rather than simply being required to inform them. The officer could also be required to ensure that the suspect and their parent or independent adult understood.
- For young persons, removing the requirement that both they and their parent consent and placing responsibility either on the parent or on the young person to consent. Parental consent is required by the Australian model, although we note that this may undermine the autonomy of the young person. Conversely, asking the young person to consent may not be in keeping with the "protective code" envisaged by the Oranga Tamariki Act.[118]

8.92 Retaining the ability to obtain suspect samples by informed consent may be the most cost and time efficient of the three options. Further, it could instil in some suspects a sense of control and potentially enable some of the consent-based tikanga processes used in collecting biological samples in the health sector to be adapted.[119] However, the power imbalance would remain problematic, particularly for Māori in the context of over-representation in criminal justice statistics and acknowledged bias in policing.[120]

115 Ethics Group: National DNA Database *Annual Report of the Ethics Group: National DNA Database* 2016 (October 2017) at 12.

116 Oversight options are discussed in Chapter 15.

117 Bruce Barbour *DNA Sampling and other forensic procedures conducted on suspects and volunteers under the Crimes (Forensic Procedures) Act 2000* (NSW Ombudsman, 1 October 2006) at 142-143.

118 See discussion at [8.83]–[8.84].

119 See for example, Maui Hudson and others *He Tangata Kei Tua: Guidelines for Biobanking with Māori* (Te Mata Hautū Taketake – Māori and Indigenous Governance Centre, Hamilton, October 2016) at 14–18.

120 Interview with Mike Bush, Commissioner of Police (Lisa Owen, The Nation, 28 November 2015) transcript provided by Scoop Independent News (Wellington). See also Nicholas Jones "Police Commissioner: Racial profiling perception 'concern we need to address'" *The New Zealand Herald* (online ed, Auckland, 8 June 2018).

Option 2 - Obtain suspect samples only by court order

8.93 Under this option, there would be no ability to obtain a suspect sample by consent. Instead, police officers would need to apply for a suspect compulsion order or a juvenile compulsion order in every case. This option would be administratively burdensome for Police and the courts and onerous for suspects, especially if there was no dispute as to the availability of the order. However, the burden may not be too significant, as there are currently fewer than 800 suspect consent orders obtained per year (see [8.38]). The removal of consent as an option precludes the tikanga-based processes used in collection of biological samples in the health sector being adapted for use, although as we note, there is some difficulty in taking tikanga concepts developed in the health context for use in the criminal justice context.

8.94 A variation on this option would be to allow samples only to be taken from a young person pursuant to a court order. This would align with the protective nature of the youth justice regime. It also may not place too much of a burden on Police and the courts, as few suspect samples are obtained from young persons each year. In effect, this would treat 14 to 17-year-old suspects in the same way as the CIBS Act currently treats 10 to 13 year-olds suspected of very serious offending.

8.95 A further variation on this option would be to dispense with Part 2A of the CIBS Act, which enables police officers to obtain samples from children suspected of non-prosecutable offending and who are in need of care and protection solely by consent. It has only been used 22 times since it was inserted into the legislation 14 years ago.[121] This suggests that it is not needed as a tool to help Police to deal with children suspected of offending who are in need of care and protection. Furthermore, of all of the categories of suspects in the CIBS Act, 10 to 13 year-olds are the most vulnerable and the least capable of providing informed consent. Removal of Part 2A would also simplify the Act.

8.96 Another variation on this option would be to follow the Irish model where, if a police officer is of the opinion that a person may not be capable of providing informed consent to suspect sampling, the officer must arrange for the person to be formally evaluated by a registered medical practitioner. If the person is found not to have the capacity to consent for any reason (including age or physical or mental disability), the sample may only be taken pursuant to a court order.[122] Such an assessment could be standard practice if a suspect was under a certain age.

Option 3 – A contestable notice regime

8.97 A third option would be to remove consent but, instead of requiring an application to court in all cases, introduce a contestable notice procedure. This would be similar to the databank compulsion notice regime for convicted offenders, which is contained in Part 3 of the Act. As with option 2, this would remove the possibility of adapting tikanga-based processes developed for use in the health context.

8.98 Under this option, the criteria for a suspect or juvenile compulsion notice would be the same as in the current Act in relation to the equivalent orders. An appropriately senior police officer could issue such a notice if they believed that those criteria were met. The

121 See discussion at [8.22]. Part 2A was used eight times in 2017-2018: New Zealand Police *Annual Report* 2017-2018.

122 Criminal Justice (Forensic Evidence and DNA Database System) Act 2014 (Ireland), ss 2 definition of "protected persons" and 10.

suspect would then have a set time within which to contest the notice. If the notice was contested, there would be a hearing before a judge – or potentially an oversight body – to determine whether the criteria had been met.

8.99 This option would be more efficient than option 2 (requiring a court order), and it would avoid some of the difficulties of trying to facilitate "free and informed consent". However, a contestable notice regime would place the onus on suspects to be proactive. Suspects may not have the resources to contest the order, and again, there is a risk that suspects either may not understand the notice (due to literacy or capacity issues) or may not understand the importance of taking action and the implications of not doing so. Other suspects may not contest a notice in a desire to avoid going to court. A less formal procedure involving an oversight body might go some way towards ameliorating that concern. This option, however, would depend in part on the other functions given to an oversight body. If those functions primarily related to systemic as opposed to case-specific matters, a role of reviewing suspect compulsion notices may not be appropriate. Oversight options are discussed in Chapter 15.

Q14 What concerns, if any, do you have about police officers obtaining suspect samples from adults, young persons (aged 14 to 16)[123] and prosecutable children (aged 10 to 13) by consent? How do you think those concerns could be best addressed in new legislation?

ELIMINATION SAMPLES

8.100 As explained, an elimination sample is a reference sample that is obtained, in relation to a particular case, from a person who is not considered to be a suspect, for example, a victim or a third party. The purpose of obtaining the sample is to compare the DNA profile generated from it to profiles generated from a crime scene sample in order to isolate the offender's DNA. For example, in a case of sexual offending, the crime scene sample may contain the victim's DNA, DNA from a consensual sexual partner and the offender's DNA. By obtaining elimination samples from the victim and their partner, a scientist may be able to analyse the mixed crime scene sample to isolate the DNA profile of the offender.

8.101 The leading case in relation to elimination samples is the Court of Appeal's pre-trial decision in *R v Taufa*.[124]

R v Taufa

8.102 The complainant was 12 years old at the time of alleged sexual offending and 13 years old when she gave birth to a baby. Following the birth, the complainant told police officers that she had been raped by her grandfather. In the circumstances, the officers decided to

123 It is intended that, on 1 July 2019, the Criminal Investigations (Bodily Samples) Act 1995 will be changed to align with the change in the Oranga Tamariki Act 1989 to the age of young persons. If that change occurs, the definition of "young person" will be amended to include those aged 17 years old. (Due to change to 17 years on 1 July 2019 per the Children, Young Persons, and Their Families (Oranga Tamariki) Legislation Act 2017, s 7(4)). If that change occurs, the definition of "young person" will be amended to include those aged 17 years old.

124 *R v Taufa* [2016] NZCA 639.

obtain elimination samples from other males that the complainant had been in contact with as well. This included Mr Taufa.

8.103 The elimination sampling form that the defendant signed pre-dates the one currently used by Police. It stated that the defendant had been told and understood that:[125]

> Analysis of the samples will either tend to disprove my involvement in the offences or provide a result which may require another request for me to provide a bodily sample to the police.

8.104 The analysis of his elimination sample strongly indicated that the defendant was the father of the complainant's child. Police officers informed the defendant of the results and asked him to give a voluntary statement. The defendant agreed and admitted to having sex with the complainant once. After a further interview with the complainant, the defendant was charged with four counts of rape and one count of unlawful sexual connection with a young person.

8.105 At a pre-trial hearing, the District Court ruled that the defendant's admission to police officers was inadmissible. The Judge found that the defendant's original elimination sample had been obtained lawfully but that it was then improperly used by police officers to obtain the admission.[126] The elimination sample could not have been used for evidential purposes, so it should not have been used by Police as if it was a suspect sample. Her Honour emphasised that, after receiving the results of the analysis, police officers could have (and should have) obtained a suspect sample from Mr Taufa under Part 2 of the Act.

8.106 The Court of Appeal declined to determine whether the elimination sample or the admission had been lawfully obtained from the defendant. The Court proceeded on assumption (without deciding) that both were unlawful and dealt with the case under section 30 of the Evidence Act 2006.[127] This section provides that improperly obtained evidence must be excluded from any trial, unless the exclusion would be disproportionate to the impropriety. The Court held that exclusion would be disproportionate in this case, particularly given the seriousness of the offending and the genuinely held belief of the police officers that they were acting lawfully.

8.107 In its decision, the Court of Appeal highlighted the "important" issues of interpretation arising from the submissions made on the defendant's behalf as:[128]

(a) the CIBS Act is a code for obtaining biological samples for use in criminal investigations;[129] alternatively,

(b) if the CIBS Act is not a code, Police require an independent statutory power to obtain an elimination sample by consent and none exists; alternatively

(c) if Police can obtain elimination samples without express statutory authority, the informed consent provisions in the Human Tissue Act 2008 apply.

The Court commented that these may need to be addressed in a future case.

125 *R v Taufa* [2016] NZCA 639 at [23].

126 *R v Taufa* [2016] NZDC 16263 at [19]–[21] and [27]–[34].

127 *R v Taufa* [2016] NZCA 639 at [17].

128 *R v Taufa* [2016] NZCA 639 at [13]–[16].

129 This submission was based on section 72(c) of the Criminal Investigations (Bodily Samples) Act 1995, which states that:

> Nothing in this Act—… (c) shall be taken to limit or affect the circumstances in which any specimen from a person's body (other than a bodily sample), or any other particulars of a person (including (without limitation) fingerprints and dental impressions) may be taken from any person with that person's consent. (Emphasis added.)

8.108 This case highlights the three main issues that we have identified with elimination samples: legal certainty; the relationship between suspect and elimination sampling; and how elimination samples may be used.

Legal certainty

8.109 The common law may already enable police officers to obtain elimination samples by consent. However, given the current legal uncertainty, the degree of intrusion inherent in any biological sampling by the State and the need for accessible and transparent law in this area, we think that this power should be in legislation.

8.110 We note that several Australian jurisdictions, Canada and Ireland all have statutory powers for police officers to obtain elimination samples. In Australia, it is common for legislation to enable officers to obtain "volunteer (limited purpose)" samples. The resultant profiles are stored on DNA profile databases but may only be used in casework. This means that they can be compared to the crime scene sample in the particular case but not to any other sample on the database.[130] Canada takes a similar approach to "victim" samples.[131] Ireland takes a slightly different approach. Its legislation enables the collection of volunteer samples for use in casework, but these are not automatically stored on a database.[132] Volunteer samples can be obtained from anyone who is not in police custody, including a victim. In all instances, the elimination samples can be obtained by consent, but the legislation prescribes the collection process, how the sample may be used and how long the sample and profile will be retained.

The relationship to suspect sampling

8.111 In some cases, as occurred in *R v Taufa*, there may be a match between the crime scene sample and an elimination sample, which implicates that person as a suspect. The District Court considered that, in this scenario, the appropriate Police action would have been to obtain a second sample using the suspect regime in Part 2 of the CIBS Act. This approach, however, may incentivise the use of the elimination sampling regime in borderline cases.

8.112 At least under current practice, elimination sampling is much less constrained than suspect sampling. Using the less protective regime to generate information that could support a suspect compulsion order seems problematic, even if it is done in good faith. We prefer Police's current policy, which is that, if there is any doubt that a person could be the offender, the suspect regime must be used.

The use of elimination samples

8.113 Victims and third parties need to be encouraged to provide elimination samples to Police. Without such samples, many investigations would needlessly stall. To provide that encouragement, we think that there need to be strong statutory protections around the use of elimination samples.

130 See Crimes (Forensic Procedures) Act 2000 (ACT), s 97; Crimes Act 1958 (Vic), s 464ZGI; Crimes (Forensic Procedures) Act 2000, s 93.

131 DNA Identification Act SC 1998 c 37 5.3(1).

132 Criminal Justice (Forensic Evidence and DNA Database System) Act 2014 (Ireland), s 27.

8.114 In our view, there are three ways in which these samples could be used to the detriment of the person who provided them. First, there could be a match that implicates the person as a suspect, as in *R v Taufa*. Second, if a person refuses to provide an elimination sample, this refusal could generate suspicion and be used to support an application for a suspect or juvenile compulsion order. Third, if a mixed crime scene sample is uploaded to the CSD without removing the DNA that is known to be from a victim or third party, that mixed crime scene sample could be found to match another sample on the CSD. This could implicate the victim or third party (who is identifiable because of their elimination sample) in other offending. The solution to this problem largely lies in the criteria for uploading samples to the CSD. However, as we explain in Chapter 10, there would still be a risk of such a match occurring, and this risk would need to be managed.

Options for reform

8.115 We do not think that obtaining elimination samples by informed consent is as problematic as it is for suspect samples. It also enables consent-based tikanga processes to be considered. A person asked to provide an elimination sample should be in a position to give free and informed consent as long as a statutory regime ensures that:

(a) the suspect regime is used in all borderline cases;

(b) there are protections in place to ensure that an elimination sample cannot be inappropriately used against the person who provided it;

(c) clear advice is given around analysis, retention and destruction of the sample and resultant profile; and

(d) there is no power to obtain an elimination sample by compulsion.

These measures should address the concerns about the inherent imbalance of power that we have noted.

8.116 In terms of the necessary statutory protections, we are considering the following options:

(a) Empowering a police officer to obtain an elimination sample but only where the officer has reasonable grounds to believe that the relevant person is not the offender and that there would be a legitimate reason for their DNA to be found in the crime scene sample.

(b) Creating a statutory ban on presenting the following information being used in support of an application for a suspect compulsion order or a juvenile compulsion order:

(i) A match between an elimination sample and a crime scene sample. This would include a direct match between the samples, or a match discovered through use of the CSD. There could be an exception to this ban, if the offending was particularly serious.[133]

(ii) A refusal to provide an elimination sample.[134]

133 We discuss this option and variations on it, in the context of the Crime Sample Databank, in Chapter 10.

134 The Irish legislation contains a similar provision. The Criminal Justice (Forensic Evidence and DNA Database System) Act 2014 (Ireland), s 27(9) states that:

> A refusal of a person to give consent [to provide a volunteer sample] shall not of itself constitute reasonable cause for a member of the Garda Síochána [the Irish Police] to suspect the person of having committed the offence concerned for the purpose of arresting and detaining him or her … in connection with the investigation of that offence.

(c) Empowering a court or oversight body to review any case where an elimination sample is unexpectedly found to match a crime scene sample to ensure that all of the decisions in the case were appropriately made. This could be considered as an alternative to a statutory ban on Police using the match to obtain a suspect compulsion order.

Q15 Do you think that a statutory framework should be put in place governing the collection of elimination samples (that is, samples from victims, third parties and investigators)? If so, what do you think the key features should be?

THRESHOLD ISSUES

8.117 In most instances, police officers can only obtain a suspect or elimination sample if they are investigating an imprisonable offence or the offence of peeping and peering.[135] This is similar to the thresholds that apply in the United Kingdom, Scotland and the United States.[136] However, Ireland and Canada have a higher threshold. A suspect or elimination sample can only be obtained by Police if they are investigating an offence with a minimum of five years' imprisonment.[137]

8.118 Arguments can be made both ways as to whether the current imprisonable offence threshold or an alternative threshold of five years' imprisonment should be preferred. It is ultimately a judgement call as to which threshold seems proportionate to the degree of privacy intrusion inherent in the sampling process.[138] At this stage in our review, it is hard to assess the level of privacy intrusion as there is continuing debate as to what forensic analysis techniques are appropriate, as discussed in Chapter 7.

8.119 Nevertheless, we note that the threshold for casework could justifiably be lower than the threshold for databank purposes. That is because there will be a factual basis for seeking to obtain a suspect or elimination sample in a particular case.[139] It is not a speculative process, like databanking. Therefore, suspect and elimination sampling is more likely to result in probative evidence, and this tips the balance towards justifying a greater privacy intrusion. We discuss the threshold that should apply for obtaining a sample for the known person databank in Chapter 11.

MASS SCREENING

8.120 A DNA mass screening (also known internationally as a "DNA dragnet" or "DNA sweep")[140] is when police officers ask a relatively large group of people, who share

135 Criminal Investigations (Bodily Samples) Act 1995, s 6 and Police Manual *DNA Sampling* at 46.

136 Police and Criminal Evidence Act 1984 (UK), ss 62-63; Criminal Procedure (Scotland) Act 1995, s 18; for an analysis of state laws in the United States see <http://www.ncsl.org/Documents/cj/ArresteeDNALaws.pdf>.

137 Criminal Justice (Forensic Evidence and DNA Database System) Act 2014 (Ireland); Criminal Code RSC 1985 c C-46, s 487.04-487.05 (Canada).

138 This proportionality assessment is required under section 21 of the New Zealand Bill of Rights Act 1990. For further discussion see Chapter 2.

139 The exception is mass screening which we discuss at [8.120]–[8.132] below.

140 Sheldon Krimsky and Tania Simoncelli *Genetic Justice: DNA Data Banks, Criminal Investigations, and Civil Liberties* (Columbia University Press, New York, 2011) at 47.

particular characteristics, to provide reference samples by consent to assist with an investigation. The characteristics will be ones that the investigators believe that the offender also shares. For instance, police officers may ask all males between the ages of 20 and 30 years old who live in a particular town to provide a reference sample by consent. Such screenings have occurred infrequently in New Zealand but regularly occur in the United States and the United Kingdom.

8.121 The first DNA mass screening occurred in the late 1980s in England. Blood and saliva samples were obtained by consent from approximately 4,000 men aged between 17 and 34 who lived close to where two 15-year-old girls had been raped and murdered. No match resulted, but it was eventually discovered that the perpetrator had paid a co-worker to give a sample on his behalf.[141]

8.122 There have been at least three mass screenings in New Zealand, some of which were conducted over a number of years. Two pre-dated the CIBS Act and involved investigations into suspected serial rapists. In the first, approximately 700 samples were voluntarily obtained, and Joseph Thompson was successfully identified as the offender.[142] In the second in 1995, seven rapes and a homicide in South Auckland were linked together due to DNA testing. Samples were obtained by consent from several thousand men, but there was no match to the crime scene sample. Malcolm Rewa was later arrested after another attack on a young woman. His DNA profile matched the other linked crimes.[143] The third case related to the murder of six-year-old Teresa Cormack in 1987. At the time, there was insufficient biological material to generate a DNA profile from the crime scene sample.[144] However, scientific developments enabled a profile to be generated in 2001, and this was compared to over 800 reference samples that were obtained by consent from people who had been nominated as suspects during the investigation.[145] We understand that, where people agreed, dual samples were obtained for both casework and databank purposes. As a result, Jules Mikus was identified and later convicted.

8.123 Police has advised that it does not currently have a specific policy in respect of mass screenings.

141 This became known as the "Pitchfork" case. This case is summarised in Sheldon Krimsky and Tania Simoncelli *Genetic Justice: DNA Data Banks, Criminal Investigations, and Civil Liberties* (Columbia University Press, New York, 2011) at 48–49.

142 Institute of Environmental Science and Research *A Brief History of Forensic DNA 1990-2010: Marking 20 years of DNA analysis for the New Zealand criminal justice system* (February 2010) at 5.

143 Institute of Environmental Science and Research *A Brief History of Forensic DNA 1990-2010: Marking 20 years of DNA analysis for the New Zealand criminal justice system* (February 2010) at 5.

144 Institute of Environmental Science and Research *A Brief History of Forensic DNA 1990-2010: Marking 20 years of DNA analysis for the New Zealand criminal justice system* (February 2010) at 7 and 13.

145 *Mikus v R* [2011] NZCA 298 at [17]–[20]. It is not clear from the judgment whether all these samples were obtained under Part 2 as suspect consent samples or whether some were obtained voluntarily from people (outside of the legislative regime).The reference sample obtained in 2002 from Mr Mikus was obtained under Part 2 of the Criminal Investigations (Bodily Samples) Act 1995 by consent.

Issue

8.124 The difficulty with DNA mass screening is that it does not neatly fall into the category of elimination or suspect sampling. If police officers are conducting a mass screening, the hope is that one of the reference samples obtained will belong to the offender. This makes mass screening different from elimination sampling. However, if the officers have no reason to suspect any particular person of the offending, the suspect regime also does not seem like a comfortable fit.[146]

8.125 We note that Part 2 of the CIBS Act could currently be used to conduct a mass screening. That is because section 2 of the CIBS Act defines a "suspect" as:

> **suspect**, in relation to an offence, means any person whom it is believed has, or may have, committed the offence, whether or not –
>
> (a) that person has been charged with that offence; or
>
> (b) there is good cause to suspect that person of having committed that offence.

8.126 Under this definition, a police officer may ask any person to provide a suspect sample by consent as long as they believe that the person "may have" committed the offence.[147] If that person refuses, however, a compulsion order would not be available in the context of a mass screening because individualised suspicion is required.

8.127 Notably, if we reform the suspect regime to remove consent or to require particularised suspicion before asking for a suspect sample by consent, mass screenings would become unlawful. This raises the question: Should there be a statutory power to conduct a mass screening – either as a variation on the power to obtain a suspect sample or as an entirely separate power? In answering this question, it is important to recognise that mass screenings raise separate concerns about informed consent due to the additional societal pressure to comply with the police sampling request.[148]

The Irish model

8.128 Ireland has addressed this issue by creating a bespoke statutory power for Police to conduct a mass screening.[149] The provision enables the Chief Superintendent of the Irish Police to formally authorise a mass screening in relation to a "class of persons". The authorisation may be given if there are reasonable grounds for believing that the mass screening is likely to further the investigation and that it is "a reasonable and proportionate measure to be taken in the investigation of the offence". The class of person may be determined by reference to sex, age, kinship, geographic area, time of an activity and/or any other matter considered appropriate.

8.129 Once the authorisation is obtained, a police officer may ask anyone falling within that class of persons to consent to providing a reference sample. The officer must inform the person about the authorisation, the reason for the mass screening, their ability to refuse and withdraw consent and the analysis, use and destruction of the sample. Further, if

146 Police advises that its own research has established that sampling in mass screenings is not random or indiscriminate. Those sampled are potential suspects that have been identified through the investigation (including through techniques such as criminal behaviour analysis).

147 Criminal Investigations (Bodily Samples) Act 1995, s 6(1).

148 Sheldon Krimsky and Tania Simoncelli *Genetic Justice: DNA Data Banks, Criminal Investigations, and Civil Liberties* (Columbia University Press, New York, 2011) at 50-52; and Jeremy Gans "Something to Hide: DNA, Surveillance and Self-Incrimination" (2001) 13 Current Issues Crim Just 168 at 170.

149 Criminal Justice (Forensic Evidence and DNA Database System) Act 2014 (Ireland), s 29.

they refuse, their refusal "cannot be used as a reason, in and of itself" to arrest or detain the person in respect of the offending.

Options for reform

8.130 Something akin to the Irish model could be introduced into any new DNA legislation. The Act could empower a suitably senior police officer (as in Ireland) or a court or an independent oversight body to consider NZBORA, Treaty of Waitangi, privacy and tikanga Māori issues and to authorise a mass screening in cases of very serious offending if there are reasonable grounds for believing that the mass screening is likely to further the investigation. To recognise the Treaty principles of rangatiratanga, partnership and equity, it is important to ensure that Māori interests are central to governance and decision making about mass screening. The legislative provision could include a safeguard to protect against a person's refusal being used against them. This could be framed in the same way as the Irish legislation or in stronger terms (for instance, by removing the phrase "in and of itself") to address concerns that mass screening undermines free consent.

8.131 Alternatively, if the authorisation was given by the court, the court could simply compel any individual falling within the class of persons to comply.[150] There could be an offence for refusal to give a sample. This approach would address our concerns about informed consent, but there is a risk of breaching section 21 of NZBORA because it would amount to compelled sampling in the absence of individualised suspicion. It could also impact on whanaungatanga and would need to be assessed carefully for consistency with the principles of the Treaty of Waitangi.

8.132 An alternative option, given that there have only been a handful of mass screenings in New Zealand, would be to leave this matter to be resolved in the design of the suspect regime. The suspect regime could be reformed in a way that makes mass screenings unlawful. If mass screening is lawful under a new suspect regime, Police could deal with it by developing a publicly available protocol (in conjunction with an oversight body with capacity to consider NZBORA, Treaty of Waitangi, privacy and tikanga Māori issues).

Q16 How do you think mass screenings should be regulated in New Zealand?

150 This option is preferred by Gans and is discussed at length in his article: Jeremy Gans "Catching Bradley Murdoch: Tweezers, Pitchforks and the Limits of DNA sampling" (2007) 19 Current Issues Crim Just 34.

CHAPTER 9

Reference samples – indirect collection

INTRODUCTION

9.1 In Chapter 8, we looked at how police officers can obtain reference samples directly from suspects and other known persons. In this chapter, we explore a related topic: the rules around indirect suspect sampling. This is when a police officer obtains a biological sample from a secondary source – rather than from the suspect themselves. There is a range of ways this can be done, including use of:

- a personal item that belongs to the suspect, for example, a toothbrush or a pair of underpants;
- a biological sample collected for a different purpose, for example, a sample taken for medical testing (such as the blood spot cards collected for the Newborn Metabolic Screening Programme);
- an item or a biological sample that the suspect has "abandoned" in a public place or at a police station, for example, a coffee cup that has saliva on it; or
- a biological sample from, or DNA analysis results about, a close genetic relative.

9.2 None of these indirect sampling methods are covered by the Criminal Investigations (Bodily Samples) Act 1995 (CIBS Act), and their relationship to Part 2 of that Act is unclear. A further significant point to note is that none of these methods involves direct interference with the suspect's bodily integrity.

9.3 As we explained in Chapters 2 and 4, the policy behind the original CIBS Act and subsequent amendments focused heavily on having appropriate mechanisms in place to protect bodily integrity and physical privacy. Those concerns do not arise in relation to indirect suspect sampling, but other legal issues are raised, including in relation to informational privacy.

9.4 This chapter looks at the legal status of the biological sample in the context of indirect sampling. Is a biological sample "property"? If so, who "owns" it? Does a person have any actionable privacy interest in their DNA? What about the DNA of their relatives? We then look at indirect sampling methods and explain the circumstances in which each method might be of use to New Zealand Police in investigating crime, as well as exploring options for managing the competing legal issues associated with these methods.

THE LEGAL STATUS OF THE BIOLOGICAL SAMPLE

9.5 In Chapters 5 and 6, we discussed the legal status of biological samples collected from crime scenes. We explained that a crime scene sample contains personal information and therefore the information privacy principles in the Privacy Act 1993 apply. We also explained that any analysis of a crime scene sample is probably a search in terms of section 21 of the New Zealand Bill of Rights Act 1990 (NZBORA). That is because it arguably intrudes upon a person's reasonable expectation of privacy.

9.6 However, analysis of a crime scene sample is unlikely to breach section 21, because of the close connection between the sample and the offence under investigation. This connection is likely to justify the privacy intrusion, making the search a reasonable one. Furthermore, the crime scene sample will have been originally collected pursuant to a search warrant or a statutory search power or by consent. The authority under which a search is conducted also affects the reasonableness of the overall search.[1]

9.7 Biological samples that are not found at crime scenes raise slightly different legal issues. These samples still contain personal information and their analysis could still intrude upon a person's reasonable expectation of privacy. However, unlike crime scene samples, there may not be a lawful basis upon which to collect them without informed consent.

9.8 It is uncertain whether the common law provides a power for a police officer to arrange for DNA analysis of a biological sample sourced from a discarded item. It is also unclear whether a search warrant is available under the Search and Surveillance Act 2012 in respect of a biological sample. All of this uncertainty stems from the possible existence of a variety of different legal interests in a biological sample.

9.9 This chapter begins by looking at international case law relating to indirect covert DNA sampling (also known in some jurisdictions as "abandoned" sampling). These cases illustrate a number of the legal issues that arise in the context of indirect sampling. We then look at the likely position in New Zealand based on our current case law and legislation. Indirect sampling is not a common police practice in New Zealand. However, we conclude that there are situations where its use could be justified.

International case law relating to covert indirect sampling

Australia

9.10 There have been several cases of covert DNA sampling in Australia[2] where a police officer has collected an item discarded by a suspect in public and used it to generate a DNA profile. The courts have held that, since Australian DNA legislation only regulates the collection of a reference sample directly from the body of a suspect, other means of collection are lawful.[3] Accordingly, Australian courts have held that, in a situation where a suspect has declined to provide a sample on request, it was lawful for police officers to collect a cup from a police station rubbish bin for the purpose of DNA profiling.[4] In another case, it was held to be lawful for police officers to collect a cigarette butt that

1 See Chapter 6.

2 *R v White* [2005] NSWSC 60; and NSW Ombudsman *DNA sampling and other forensic procedures conducted on suspects and volunteers under the Crimes (Forensic Procedures) Act 2000* (October 2006), at [9.2].

3 *R v Phuc* [2000] VSC 242 at [16]; *R v Kane* [2004] NSWCCA 78, (2004) 144 A Crim R 496 at [13]; *R v White* [2005] NSWSC 60 at [28]; and *R v Fleming* [2007] NSWSC 328 at [15]. See also *R v Nicola* [2002] NSWCCA 63 at [50].

4 *R v Nicola* [2002] NSWCCA 63.

had been dropped on a footpath and use it for DNA analysis.[5] The New South Wales Court of Appeal also held that it was lawful for police officers to use covert DNA sampling to generate DNA profiles for six "persons of interest" in a case to help to narrow down from a list of 20 persons.[6]

The United States and Canada

9.11 Unlike Australia, the United States and Canada both have constitutional protections that are similar to section 21 of NZBORA. These protect individuals against unreasonable search and seizure by the State. As in New Zealand, this protection is only engaged if the State action intrudes upon the individual's "reasonable expectation of privacy".[7] Therefore, in cases of covert indirect DNA sampling – which is known as "abandoned sampling" in North America – the legal issue is: Does the suspect have a reasonable expectation of privacy in relation to the item they discard?

9.12 In answering this question, the North American jurisprudence focuses heavily on where the item is found. For instance, the North Carolina Court of Appeal held that a suspect had a reasonable expectation of privacy in a cigarette butt that he had thrown on his patio, because the patio was part of his house.[8] In other cases the courts have held that a police officer may lawfully collect a suspect's discarded cigarette butts, chewing gum, hair, spit, coffee cups, straw and empty cans, as long as they have been thrown away in public.[9] The North American courts have also held that police officers may encourage suspects to abandon biological material in public. On that basis, a fake chewing gum survey,[10] a fake Pepsi taste test challenge[11] and a fake law suit[12] have all been held to be lawful ways for Police to collect a suspect's DNA. In the case of the fake law suit, police officers posed as a law firm seeking parties for a class action to recover traffic fines. Their letter required recipients to respond by post, and the suspect's saliva was recovered from the envelope.

9.13 In the United States, this reasoning extends beyond public places to police stations and prison cells.[13] In the 2014 case of *Glenn Joseph Raynor v State of Maryland,* police

5 *R v Nicola* [2002] NSWCCA 63; and *R v Jason Michael Kane* [2004] NSWCCA 78, (2004) 144 A Crim R 496 at [13].

6 *R v White* [2005] NSWSC 60.

7 See United States Constitution, amend IV and Canadian Charter of Rights and Freedoms, pt 1 of the Constitution Act 1982, being sch B to the Canada Act 1982 (UK), s 8.

8 *State of North Carolina v Blake J Reed* 182 NC App 109, 641 SE 2d 320 (NC 2007). The police officers in this case were lawfully on the property when they collected the cigarette butt, but the Court held that it had not been "abandoned" because it was still on the suspect's patio.

9 *People v Rolando N Gallego* 190 Cal App 4th 388 (Cal 2010) (cigarette butt); *Commonwealth v. Raul Cabral* 69 Mass App Ct 68, 866 NE 2d 429, 16 May 2007 (spit on the sidewalk); *R v Giovanni D'Amico* (Cour du Québec), 18 March 2013– (Reasons judgment) (coffee cup); *R v Marini* O.J. 6197, 71 W.C.B. (2d) 727, Ontario, 6 October 2005 (empty cans in a bin at a courthouse); *R v Grywacheski* 2004 MBQB 64, 182 Man. R. (2d) 278, 61 W.C.B. (2d) 113 (Manitoba, 9 March 2004 (cigar butt in an ashtray at the entry to a courthouse); R v Paul O.J. No. 1333, 117 C.R.R. (2d) 319, 61 W.C.B. (2d) 163, Ontario, 4 March 2004 (cups and straws); *R v Payne BCSC* [1998] B.C.J. No. 1372, 39 W.C.B. (2d) 9, British Columbia, 28 May 1998 (gum and hair).

10 *R v Delaa* [2006] A.J. No. 948, Alberta, 9 June 2006.

11 *People v Raul LaGuerre J* 29 AD 3d 82, 815 NYS 2d 211, New York, 16 May 2006.

12 *State of Washington v John Nicholas Athan* 160 Wash2d 354, 10 May 2007.

13 State of North Carolina v Donald Eugene Borders (Court of Appeals of North Carolina Robert N Hunter Jr September 2 2014) 762 SE 2d 490; Glenn Joseph Raynor v State of Maryland 440 Md 71, 99 A 3d 753; John Paris, v. Dale Artus, Superintendent of Clinton Correctional Facility District Court, ED, New York Vitaliano, District Judge December 1 2010 Not reported in F Supp 2d, No. 08-CV-1785 (ENV); Kelroy Williamson v State of Maryland 413 Md 521, 993 A 2d 626; The People of the State of New York v. Mark C. Sterling 57 AD 3d 1110, 869 NYS 2D 288; Kevin Piro v State of Idaho 146

officers had interviewed a suspect at a police station.[14] The officers asked the suspect to provide a sample by consent. He refused. When the suspect left the police station, the officers rubbed a swab against the armrest of the chair he had been sitting in. The officers then sent the swab away for DNA analysis. The Maryland Court of Appeal held that the officers' actions were lawful and emphasised that the analysis only examined 13 areas of the suspect's "junk" DNA.[15] In a dissenting judgment, Justice Adkins stated:[16]

> The Majority's approval of such police procedure means, in essence, that a person desiring to keep her DNA private must conduct her affairs in a hermetically sealed hazmat suit.

9.14 In Canada, a distinction is drawn between items discarded by a person in police detention and items discarded by a person who is not in police detention. In *R v Stillman*, the Supreme Court of Canada stated that, while a person will have "a lower expectation of privacy following his or her arrest and subsequent custody", whether a person has "abandoned [an] item and relinquished any privacy interest in [it] will have to be determined on the particular facts presented in each case".[17] In *Stillman*, the suspect was being detained at a police station and refused to provide a biological sample by consent. The Court stated that his expectation of privacy was "not so low as to permit" a police officer to seize his used tissue from the police station rubbish bin and to use that to obtain a DNA profile.[18] It held that a person in police detention "cannot prevent those samples… being taken" and that it was a violation of the suspect's right to be free from unreasonable search and seizure.[19] The Court said that police should not be able to profit from "the inevitable consequence of the normal functioning of the human body".[20] On the other hand, if an item is thrown away after a person leaves a voluntary police interview, they have no reasonable expectation of privacy in it.[21]

Ireland

9.15 The courts in Australia and North America have taken a property-based approach to covert DNA sampling, focusing on the location of the discarded item and the person's intention to exert control over that item. This suggests that the item, and by extension the biological material on it, are owned by the person in some way.

9.16 The Irish Supreme Court has a different approach to the issue.[22] In *Director of Public Prosecutions v Wilson*, the suspect was detained in police custody. The suspect had refused to give samples by consent so police officers collected cigarette butts that the suspect had discarded at the police station and used them to generate a DNA profile.

Idaho 86, No. 33409, 190 P3d 905; Commonwealth v. Lee Perkins 450 Mass 834, 883 NE 2d 230; Commonwealth v Jeffrey Bly (Supreme Judicial Court of Massachusetts, Suffolk Spina J March 7 2007) 448 Mass 473, 862 NE 2d 341; Commonwealth v Melvin B Ewing (Appeals Court of Massachusetts, Barnstable Smith J, October 6 2006) 67 MassAppCt 531, 854 NE 2d 993; The People of the State of New York v Anthony Ayler Supreme Court, Kings County, New York James P Sullivan J, September 22 2004) 799 NYS2d 162, 5 Misc 3d 1020(A); Commonwealth v Jordan Martel Rice (Supreme Judicial Court of Massachusetts, Plymouth Spina J) March 24 2004 441 Mass 291, 805 NE 2d 26.

14 *Glenn Joseph Raynor v State of Maryland* 99 A 3d 753 (440 Md 71 2014) at 754.

15 *Glenn Joseph Raynor v State of Maryland* 99 A 3d 753 (440 Md 71 2014) at 754-768.

16 *Glenn Joseph Raynor v State of Maryland* 99 A 3d 753 (440 Md 71 2014) at 775.

17 At [62].

18 At [61].

19 At [60].

20 *R v Stillman* [1997] 1 SCR 607 at [58]. This case was followed in *R v Nguyen* 57 OR (3d) 589 (ONCA).

21 *R v Stillman* [1997] 1 SCR 607.

22 *Director of Public Prosecutions v Wilson* [2017] IESC 54.

9.17 The Irish Supreme Court found that, whether in custody or not, a person has the same substantive right to privacy, which encompasses the "intimate information about an individual contained in DNA".[23] The Court observed that shedding DNA is involuntary:[24]

> [The suspect] could not have exercised a "choice" not to shed cells containing DNA in the station. It is an aspect of human biology that humans shed cells containing DNA. Cells are rubbed off and deposited in clothing, or fall off the skin onto a chair. Saliva may be deposited on drinking vessels or (as in this case) cigarettes or by licking an envelope. A hand holding any item may leave DNA in sweat. These are not matters of choice and do not depend on the freedom or detention of the individual.

9.18 In addition, the Court distinguished between the item discarded and the DNA information on the item, stating that:[25]

> We would accept that, while he had relinquished all interest in the physical cigarette butts, Mr. Wilson continued to retain a privacy interest in the information contained in the DNA deposited on them.

9.19 However, the Court continued, that privacy interest is not absolute. It is subject to the "compelling public interest that exists in relation to the investigation of serious crimes".[26] It noted that, under the statutory regime, the police officers could have opted to take the sample directly from the suspect by force but that:[27]

> it would clearly be contrary to public policy to hold that the Gardaí [(Irish police officers)] were in the circumstances constrained to use force, thereby risking injury to both the suspect and themselves, and that a failure to use force rendered the picking up of the discarded items unlawful.

The likely position in New Zealand

9.20 Under New Zealand law, it is not clear what legal status a biological sample has once it has been separated from its "owner". The international case law suggests that the owner may retain some form of property interest, privacy interest or both depending on the circumstances.

Is there a property interest?

9.21 New Zealand courts have held that there is no property in a dead body[28] and no property in genetic material extracted from a body.[29]

9.22 The question of extraction arose in *Re Lee*, where the High Court had to consider whether a woman had a property right in her deceased partner's sperm.[30] In finding that she did not, the Court looked to a 2009 English case, *Yearworth v North Bristol NHS Trust*.[31] *Yearworth* turned away from the approach taken in the leading case of

23 At [4.22] and [4.31].

24 At [4.28].

25 At [4.32].

26 At [4.23].

27 At [4.35].

28 *Takamore v* Clarke [2012] NZSC 116, [2013] 2 NZLR 733.

29 *Re Lee* [2017] NZHC 3263, [2018] 2 NZLR 731 at [90].

30 *Re* Lee [2017] NZHC 3263, [2018] 2 NZLR 731.

31 *Yearworth v North Bristol NHS Trust* [2009] EWCA Civ 37, [2010] QB 1. The conclusion in *Re Lee* differs from the very recent Supreme Court of Queensland decision *Re Cresswell* [2018] QSC 142, which considered whether to grant a woman the right to extract and use her deceased partner's sperm. The Judge concluded that the common law

Doodeward v Spence from 1908, which held that there can be property in a body or body part to which someone has applied skill or work.[32] The High Court agreed with the approach in *Yearworth*, stating that "[t]he suggestion that there is no property in a dead body, but there could be property in a body part to which some had applied skill or work seems incongruous"[33] and that:[34]

> Although, in some other jurisdictions, emphasis has been placed on asserted property rights, the question whether they exist in New Zealand must be judged against the statutory framework in force in this country.

9.23 In *Re Lee*, the High Court seems to suggest that property interests may be capable of being recognised where the "owner" is still alive:[35]

> In [*Yearworth*], the sperm had been donated by living males who were about to undergo chemotherapy. As they were still alive, it is understandable that the [English] Court of Appeal considered that they retained control over the stored semen, and had a right to sue for breach of bailment when the samples, through inadvertence, perished when the amount of liquid nitrogen in the tanks fell below the requisite level. Nevertheless, I leave open the question whether, as a matter of New Zealand law, an action for breach of bailment could be maintained in the circumstances disclosed in that case.

9.24 This statement suggests that, depending on the circumstances, a person may have an actionable property interest in a biological sample as long as they are still alive. This aligns, to some extent, with the property approach taken to covert indirect DNA sampling in Canada. What matters is where the sample is found and whether the person still intends to exert control over it.

Is there an informational privacy interest?

9.25 The Irish Supreme Court recognised that a person may retain a privacy interest in DNA information extracted from a discarded item while relinquishing any interest in the discarded item itself. Case law suggests that this approach may find favour in New Zealand courts.

9.26 In a 2017 decision, the New Zealand Supreme Court considered what constitutes a reasonable expectation of privacy in information as part of assessing the reasonableness of a search in terms of section 21 of NZBORA:[36]

> The reasonable expectation of privacy is directed at protecting "a biographical core of personal information which individuals in a free and democratic society would wish to maintain and control from dissemination by the state" and includes information "which tends to reveal intimate details of the lifestyle and personal choices of the individual".

9.27 It is clear that a biological sample can be analysed to reveal intimate personal details about a person. Therefore, we consider that section 21 of NZBORA is engaged. The analysis of a biological sample to generate a DNA profile is a search and must be conducted reasonably.

recognises that sperm removed from a deceased individual, to which work and skill is applied, is capable of being property. The Judge noted that this is an exception to the principle that there is no property in a corpse and an extension of the principles in *Doodeward v Spence* (1908) 6 CLR 406.

32 *Doodeward v Spence* (1908) 6 CLR 40.

33 *Re Lee* [2017] NZHC 3263, [2018] 2 NZLR 731 at [84].

34 At [28(d)].

35 At [91].

36 *R v Alsford* [2017] NZSC 42, [2017] 1 NZLR 710 at [63].

9.28 As we discussed in Chapter 6, it is useful to draw an analogy to searches of electronic devices. In that context, the Supreme Court has held that, because of "the nature and extent of information" electronic devices can hold – including information that the owner is not aware of – unique privacy interests are engaged and special search and surveillance rules should apply.[37] The same is arguably the case with DNA analysis.

9.29 Further, in the context of providing a databank consent sample for the known person databank (under Part 3), the Court of Appeal stated in *R v Toki* that:[38]

> … it is trite that DNA is not a mere fingerprint: it contains a wealth of genetic information about a person with unlimited future utility. The one-off intrusion of the procedure thus permanently erodes Mr Toki's privacy and freedom, which would usually remain beyond the reach of the state apparatus. Without Mr Toki's informed consent, the bodily sample now stored on the DNA profile databank was obtained in serious, permanent and ongoing breach of his rights.

The information privacy principles

9.30 As well as the informational privacy protection afforded by section 21 of NZBORA, the information privacy principles in the Privacy Act 1993 are engaged. That is because, as discussed in Chapter 6, by collecting and analysing a biological sample, a police officer is gathering personal information.[39]

9.31 Principles 2 and 4 are particularly relevant in the context of indirect sampling. Principle 2 states that an agency must collect personal information directly from the person concerned. There are, however, exceptions to this principle, including that an agency may collect the information indirectly:[40]

(a) if that is necessary to avoid prejudice to a criminal investigation;

(b) if direct collection is not reasonably practicable in all the circumstances of the case; or

(c) if the information is publicly available.

9.32 Principle 4 states that an agency must not collect information by means that, in the circumstances of the case, are unfair or intrude to an unreasonable extent upon the personal affairs of the individual concerned.

Is there a collective privacy interest?

9.33 The Treaty reinforces the Crown's obligation to accommodate tikanga to the fullest extent possible in the exercise of kāwanatanga.[41] The Treaty also requires the Crown to actively protect taonga, which may include whakapapa (genealogical) information.[42]

37 *Dotcom v Attorney-General* [2014] NZSC 199, [2015] 1 NZLR 745 at [57] per Elias CJ and [191]–[194] per McGrath, William Young, Glazebrook and Arnold JJ.

38 *R v Toki* [2017] NZCA 513, [2018] 2 NZLR 362 at [24].

39 At [6.30]–[6.33].

40 Privacy Act 1993, s 6 Information privacy principle 2.

41 Legislation Design and Advisory Committee *Legislation Guidelines* (March 2018) at [3.4] states that – independently of the Treaty – new legislation should, as far as practicable, be consistent with fundamental common law principles and tikanga. The Guidelines further note at [5.3] that "care should be taken where legislation may affect practices governed by tikanga". Notably, the Law Commission also has a statutory obligation to take te ao Māori (the Māori dimension) into account in all law reform projects: Law Commission Act 1985, s 5(2)(a).

42 See discussion in Chapter 6.

9.34 Whakapapa information is considered tapu and has been described as a taonga. This includes not only substantive whakapapa knowledge but also mātauranga Māori ways of knowing, collating, storing and imparting that knowledge, which is traditionally communicated orally. Access to whakapapa information is often carefully guarded, and custodians may hold it on behalf of their whānau, hapū or iwi. Therefore, while the usual focus of human rights-based privacy analysis is on living individuals, from a Māori perspective, DNA could be considered private information relating to a group, which may include deceased persons.[43] This suggests that there could be a collective privacy interest in a person's DNA.

9.35 Recognising a collective privacy interest in DNA may also accord with international developments in privacy law. As explained in Chapter 6, personal information is information that is "about an identifiable individual", but the same information can be about more than one person.[44] What matters is whether the information can be used alongside other information to identify the person.[45] As we explain below and also look at in Chapter 13, DNA information about one person is increasingly being used by police around the world to identify a close genetic relative as a suspect. This too suggests there may be a collective privacy interest in DNA.

WHAT SEARCH POWERS ARE CURRENTLY AVAILABLE TO POLICE?

9.36 In light of the various legal interests that a person may have in their biological material, it seems likely that, under New Zealand law, indirect sampling would constitute a search in terms of section 18 of NZBORA. To ensure that a search is not "unreasonable", there needs to be a lawful basis for it.[46]

9.37 At present, there are two options available to police. They could rely on the common law, which enables a police officer to do what any member of the public may lawfully do, or they could apply for a search warrant. Both options are problematic at present for different reasons.

The common law

9.38 As explained in Chapter 5, the common law enables a police officer investigating an offence to do what any member of the public may lawfully do.[47] This raises the question: Would it be lawful for a member of the public to obtain another person's biological sample and send it away for DNA analysis without informed consent? And if so, is it therefore lawful for Police to do so?

43 See Law Commission *Privacy Concepts and Issues: Review of the Law of Privacy Stage 1* (NZLC SP19, 2008) at [5.28]–[5.30] and Khylee Quince "Māori Concepts and Privacy" in Stephen Penk and Rosemary Tobin (eds) *Privacy Law in New Zealand* (2nd ed, Thompson Reuters, Wellington, 2010) 29 at 32–33.

44 Office of the Australian Information Commissioner "What is personal information?" (May 2017) <www.oaic.gov.au> at 12.

45 See the discussion in Chapter 6.

46 See Andrew Butler and Petra Butler *The New Zealand Bill of Rights Act: A Commentary* (2nd ed, LexisNexis, Wellington, 2015) at [18.17.1].

47 See the discussion in Chapter 5

9.39 In New Zealand, the answer to this question is far from clear. Depending on the surrounding circumstances, this could be an offence under the Human Tissue Act 2008 or a breach of the common law tort of privacy.[48]

The Human Tissue Act 2008

9.40 The purpose of the Human Tissue Act is three-fold – to ensure that the collection and use of human tissue:[49]

(a) only occurs with proper respect for autonomy, dignity, cultural and spiritual matters and the public health benefits associated with collection and use;

(b) does not endanger public health and safety; and

(c) does not involve financial consideration.

9.41 In relation to living persons, the Act defines "human tissue" as "material collected from a living individual [that] is or includes human cells".[50] "Collect" is defined as "to remove or take that tissue from a living … body".[51] Statutory examples of "human tissue" include organs, blood, hair, nails, skin, mucus and urine. The Act distinguishes between human tissue that is collected during a health-care procedure and tissue that is not collected in that way. "Non-health-care tissue"[52] can only be sent away for "donor analysis" if there is informed consent.[53] It is an offence under the Act to collect non-health-care tissue for donor analysis and to carry out such analysis without informed consent.[54] "Donor analysis" is defined as: "analysis for the purpose of providing information (including genetic information) about an actual or potential condition or trait of the individual whose tissue was collected".[55]

9.42 Applying these provisions to the scenario in which a member of the public collects a biological sample and sends it away for analysis without informed consent much depends on how the person obtains the human tissue/sample. If it is not taken directly from the other person, it is not "collected" under the Act. Therefore, the person sending the tissue away for analysis without first obtaining informed consent may not commit an offence but the person conducting the analysis might. We understand that in practice, however, no laboratory would conduct DNA analysis of any human tissue submitted by a member of the public without first seeing evidence of informed consent.

9.43 The Human Tissue Act does specifically recognise an exception for a police officer exercising a legal search power. However, the exception does not create a search power in and of itself.[56]

48 Given the broad definition of "agency" in the Privacy Act 1993 (which under section 2 includes a private individual) it could also involve a breach of the information privacy principles discussed, as an individual obtaining a biological sample of another may be considered to be collecting information about that person.

49 Human Tissue Act 2008, s 3.

50 Human Tissue Act 2008, s 7(1)(a)–(b).

51 Human Tissue Act 2008, s 6 definition of "collect".

52 "Non-health-care tissue" is defined in section 6 as:

> human tissue that is, or is derived from, human tissue that is collected from a living individual, but is neither– (a) collected from a consumer in the course of a health care procedure; nor (b) derived from human tissue collected in that way.

53 Human Tissue Act 2008, s 19(1).

54 Human Tissue Act 2008, s 23.

55 Human Tissue Act 2008, s 6 definition of "donor analysis".

56 Human Tissue Act 2008, s 20(a)(i).

9.44 Therefore, it would appear unlikely that Police could rely on the Human Tissue Act to provide the lawful basis to obtain a biological sample and have it analysed without consent.

The tort of privacy

9.45 It also appears that arranging for the analysis of someone else's DNA without consent may also breach the common law tort of privacy. The requirements of this tort are:[57]

(a) the existence of facts in respect of which there is a reasonable expectation of privacy; and

(b) publicity given to those private facts that would be considered highly offensive to an objective reasonable person.

9.46 As discussed, there is a strong case that a person has a reasonable expectation of privacy in the information that can be revealed by their DNA. If DNA information was obtained by a person and presented in court, that would amount to publicity.[58] The more contentious issue is whether the publicity would be "highly offensive to an objective reasonable person". This would depend on the extent of DNA analysis of both the reference sample and the crime scene sample, because once there is a match, all of the extracted DNA information is attributable to the same person. Some information would be unlikely to be considered highly offensive if publicised – for example, a person's eye or hair colour. However, publicity of other DNA information, such as health or familial information,[59] could potentially be used for a discriminatory purpose if disclosed, for example, to an insurer or an employer. This could be highly offensive to a reasonable person.

Summary

9.47 It is unclear whether it would be lawful for a member of the public to arrange for another person's DNA to be analysed without their informed consent. The power for a police officer to do the same is also legally uncertain.

9.48 The situation is somewhat clearer in the United Kingdom, where an offence of "DNA theft" was introduced in 2004. The offence prevents members of the public from collecting and analysing DNA without consent unless there is an "excepted purpose". However, the "prevention or detection of crime" is an excepted purpose.[60]

57 *Hosking v Runting* [2005] 1 NZLR 1 (CA) at [117].

58 Stephen Penk and Rosemary Tobin (eds) *Privacy Law in New Zealand* (2nd ed, Thomson Reuters, Wellington, 2016) Privacy Law in NZ at [4.3.3].

59 As mentioned in Chapter 3and Chapter 12, this sort of analysis is not currently undertaken.

60 Human Tissue Act 2004 (UK), s 45(1)(a)(ii) and sch 4, cl 5(1)(d). In 2003, the Australian Law Reform Commission recommended the creation of an offence relating to non-consensual genetic testing: Australian Law Reform Commission *Essentially Yours; The Protection of Human genetic Information in Australia* (ALRC R96, 2003) at ch 12. Subsequently, in 2008 the Model Criminal Law Officers' Committee issued a discussion paper that suggested an offence for taking bodily samples and having them genetically tested without the knowledge or consent of the person from whom they were obtained. The Committee considered that the existing legal framework in Australia did not adequately address the potential for harm arising from non-consensual genetic testing. Like the law in the United Kingdom, the Australian proposal includes an exception for law enforcement purposes. This proposal has gone no further at this stage: see Model Criminal Law Officers' Committee *Discussion Paper: Non-Consensual Genetic Testing* (November 2008).

Is a search warrant available under the Search and Surveillance Act?

9.49 The other possibility in relation to biological samples not found at crime scenes is that Police could obtain a search warrant under the Search and Surveillance Act 2012. Before this Act came into force, two Court of Appeal cases held that search warrants were available to enable a police officer to seize a personal item belonging to a suspect and to arrange for DNA analysis of the items. The cases were *R* v *T* in 1999[61] and *R* v *C* in 2001.[62]

9.50 The suspect in *R v T* had provided a reference sample by consent in relation to a rape investigation. A court later found that the reference sample had not been obtained in accordance with the CIBS Act and that there was no jurisdiction to issue a suspect compulsion order. The suspect refused to provide a second sample by consent. Police officers then applied for a warrant to search the suspect's house. They seized the suspect's razor and toothbrush, from which biological samples were obtained and analysed and a DNA profile created. The High Court found that this was neither an abuse of process nor an unreasonable search and seizure. Police acted reasonably in applying for the search warrant and in executing it.[63] This finding was upheld by the Court of Appeal.[64]

9.51 *R v C* involved an allegation of incest. A reference sample obtained directly from the suspect had been ruled inadmissible, and the suspect refused to provide a second sample by consent. A police officer applied for and obtained a search warrant and seized the suspect's underpants. A DNA profile was obtained from the underpants that strongly suggested the suspect was the offender. The Court of Appeal stated that the CIBS Act is not a code for the obtaining of all samples "by other non-invasive means". It was open to Police to pursue such lawful means, and they acted reasonably in doing so.[65]

9.52 At the time of *R v T* and *R v C*, section 198(1)(b) of the Summary Proceedings Act 1957 provided the authority to issue a search warrant in respect of "any thing which there is reasonable ground to believe will be evidence as to the commission of any such offence".

9.53 The High Court in *R v T* considered the meaning of "thing" and the significance of the distinction between the clothing or personal items seized and the bodily material potentially on them from which a DNA result could be obtained. Panckhurst J noted that:[66]

> The things belonging to the accused could not scientifically, or otherwise, be directly related to the commission of the offence. Rather, the things were a possible source of material from which a genetic imprint could be obtained. Thus the search was for a sample, rather than evidence of the kind customarily encountered under [s 198(1)(b)]. This caused me to pause. In the end result however, I consider this distinction is not of moment.

61 *R v T* (1999) 17 CRNZ 63 (HC). This was upheld by the Court of Appeal: *R v T* CA174/99, 11 June 1999.

62 *R v C* CA381/00, 19 February 2001.

63 *R v T* (1999) 17 CRNZ 63 (HC) at 73–74.

64 *R v T* (1999) BCL 759 (CA).

65 *R v C* CA381/00, 19 February 2001 at [8].

66 *R v T* (1999) 17 CRNZ 63 (HC) at 70. The Courts in both *R v T* and *R v C* relied on a statement made in *R v Sanders* [1994] 3 NZLR 450 (CA) at 461 where Fisher J stated in relation to s 198(1)(b) that:

> [A] thing will constitute evidence of the commission of an offence if its form or existence would directly or indirectly make one or more of the factual elements of the offence itself more likely.

On this basis, the Courts found that the items seized were within the scope of the warrant, the search and seizure was reasonable and the DNA evidence was admissible.

9.54 In 2007, the Law Commission published a substantial report on the law relating to the search and surveillance powers of law enforcement agencies. We considered the use of a search warrant to obtain a personal item that may contain a biological sample in the cases of *R v T* and *R v C.* We noted that:[67]

> A sample that provides a genetic profile may provide circumstantial evidence of identity, but to produce evidence of the commission of an offence, the genetic profile must be compared with other forensic material. Given the relevant human rights values, particularly privacy, we doubt that section 198 is adequate to authorise the seizure of samples for genetic analysis …. Judicial authority can be relied on, but we think that an express legislative authorisation is preferable.

9.55 In 2012, the Search and Surveillance Act (SSA) came into force, replacing section 198 of the Summary Proceedings Act with section 6(b) of the SSA. Under section 6(b), an issuing officer can issue a search warrant in respect of a place, vehicle or other thing if the issuing officer is satisfied that there are reasonable grounds:

> to believe that the search will find evidential material in respect of the offence in or on the place, vehicle, or other thing specified in the application.

9.56 "Evidential material" is defined in section 3 of the Act as "evidence of the offence, or any other item, tangible or intangible, of relevance to the investigation of the offence". Section 110(d) of the SSA allows a police officer executing a search warrant to "seize anything that is the subject of the search or anything else that may be lawfully seized". This raises the issue of whether a biological sample can fall within the ordinary meaning of "anything" and "item". It is our view that a receptacle containing a biological sample may fall within these definitions, but the sample itself may not.

9.57 In 2015, the High Court in *T v R* touched on the issue of whether DNA or biological samples (in that case, blood) can be a "thing" under section 6 of the SSA.[68] Although the Court ultimately did not have to decide the issue, the judge noted that, in the SSA, both "evidential material" and "thing" were deliberately framed in broad terms, and:[69]

> Plainly evidential material can encompass DNA, which is often used as evidence in criminal proceedings. The more difficult issue is whether an appropriate interpretation of "thing" here can encompass a human body, or the blood of a human. This raises two main questions. First, whether Parliament intended "thing" to extend to such matters in light of the words immediately preceding "thing", being "place or vehicle" (the statutory interpretation issue). Second, whether the SSA ought to apply to human tissue (be it a deceased human body or blood) in light of the tightly prescribed regime dealing with such matters (the policy issue).

9.58 The case was considered by the Court of Appeal in 2016.[70] The Court of Appeal also noted the question of whether human tissue could come within the definition of "thing" in section 6 of the SSA but found that the issue did not have to be resolved for the purpose of the appeal.[71]

9.59 This leaves the question of whether Police could apply for a search warrant to seize biological material for DNA analysis somewhat uncertain, although we note that, earlier this year, a search warrant was issued to enable police officers to pose as potential buyers of the suspect's flat in order to covertly collect the suspect's hat and comb to

67 Law Commission *Search and Surveillance Powers* (NZLC R97, 2007) at [3.52].

68 *T v R* [2015] NZHC 1588 at [79]–[83]. We discuss this case in more detail at [9.84].

69 At [81].

70 *T v R* [2016] NZCA 148.

71 At [62].

obtain a biological sample to send to The Institute of Environmental Science and Research (ESR) for DNA analysis.[72]

Summary

9.60 In respect of indirect suspect sampling, there appears to be a gap in the law. It is unlikely Police can rely on the common law to provide powers of search, and as we have identified, there is also uncertainty in relation to the use of the Search and Surveillance Act.

9.61 This gap is not only relevant to indirect collection of suspect samples. It extends to other situations where Police may seek to obtain a sample from a known person who cannot or will not consent, for example, due to age or mental capacity or a simple refusal to provide a sample to Police.[73]

PERSONAL BELONGINGS AND DISCARDED ITEMS

9.62 In light of the analysis above, we consider that a suspect has a privacy interest (and may have a property interest) in their biological material, no matter where it is found. That does not mean that any item with a suspect's biological material on it should be off limits to Police at all times. Rather, to comply with section 21 of NZBORA, a police officer may need to apply for a search warrant in order to obtain and arrange for analysis of the item, although as we have noted above and discuss further below, there may be difficulties with this. Further, to comply with the information privacy principles, the decision to undertake indirect – as opposed to direct – suspect sampling would need to be justified. This could be done using similar exceptions to those to information privacy principle 2, either on the basis that direct sampling would "prejudice the investigation" or on the basis that it would "not be reasonably practicable in all the circumstances".[74]

9.63 There may be sound law enforcement reasons to opt for indirect suspect sampling in some cases. For example, it may be that direct suspect sampling could prejudice an ongoing undercover operation, pose an undue risk of the suspect absconding or not be possible if the suspect cannot be found. In such circumstances, it could well be appropriate for a police officer to seek a search warrant in respect of personal items belonging to the suspect or items known to have been discarded by them.

9.64 However, as discussed above, there is uncertainty as to whether a biological sample can amount to a "thing" under section 6 of the Search and Surveillance Act for the purposes of obtaining a search warrant. If a warrant can be obtained, another difficulty lies in determining whether an item found during a search is relevant to an investigation. Section 112 of the Search and Surveillance Act permits a police officer to remove an item for analysis, but as we discussed in Chapter 5, analysis of the item alone would not establish its value to the investigation. To establish its value, the item would need to be compared to a reference sample. Arguably, section 112 does not envisage this situation.[75]

72 Sam Sherwood "Undercover cops pose as potential buyers at open home to get murder suspect's DNA" *Stuff* (online ed, 13 February 2018).

73 In the case of incapacity, Police would be reliant on relatives to consent on the victim's behalf. This would be different if foetal tissue were involved.

74 Privacy Act 1993, s 6 information privacy principle 2.

75 See discussion in Chapter 5.

9.65 A further difficulty in relation to discarded items is that search warrants are issued with reference to a location (that is, a place, vehicle or thing). It may not be easy to predict where a suspect may discard an appropriate item or what that item will be. The exception is that a suspect may well bring personal belongings to a police station or touch items there that could be analysed, but it is not possible for a police officer to obtain a search warrant for a police station and there are limited circumstances in which warrantless search powers would be available to search the suspect or their belongings.[76]

Options for reform

9.66 There may well be situations where it is not possible to obtain a biological sample directly from a suspect and it may be appropriate to indirectly obtain a biological sample to create a DNA profile. However, the parameters around this need to be clear. Certainty, transparency and accountability around the use of search warrants to indirectly obtain biological samples could be increased in a number of ways.

Amend the search warrant provisions in the Search and Surveillance Act

9.67 As explained in Chapter 5, the intention behind the Search and Surveillance Act was to consolidate police search powers. Therefore, it may be preferable to amend that Act to clarify that biological material may be the subject of a search warrant. If section 112 of the Act was also amended in the way proposed in Chapter 5, it would be plain that a police officer can obtain a search warrant in respect of a suspect's personal belongings.

9.68 This would clarify the existing law, but it would not draw an issuing officer's attention to the high privacy interests in DNA or to the existence of the direct suspect sampling regime and the need to use that regime unless there is a good reason not to. To rectify this, the Search and Surveillance Act could expressly cross-reference the legislation governing direct suspect sampling. Alternatively, Police could adopt a policy of routinely including this information in search warrant applications.

Create a search power to enable DNA analysis of discarded items

9.69 Even if the Search and Surveillance Act is clarified, it still may not be possible to obtain a search warrant in relation to items that a suspect may discard or "abandon". That is because a police officer may not be able identify where the suspect will discard an appropriate item or what that item will be.

9.70 One option to improve clarity is to create a statutory search power allowing police officers to arrange for analysis of a discarded item if certain criteria have been met. However, given that this is a covert action that side-steps the direct suspect sampling process, it would seem more appropriate for the officer to obtain a court order. This would align with the need to have a search warrant for the suspect's personal belongings.

9.71 A covert DNA sampling order could state that any item that a police officer has lawfully obtained from a public place may be analysed by ESR in the absence of informed consent. This would reflect that it is the analysis of the item that engages property and privacy interests, not the collection of the item itself.

[76] *R v Lucas* [2015] NZHC 1944 at [25]–[29] and [59].

9.72 This regime could be included in any new legislation replacing the CIBS Act or in the Search and Surveillance Act. The benefit of including the regime in DNA legislation would be that the relationship between direct and indirect suspect sampling could be made plain on the face of the Act. This would make the law in this area more accessible, but as noted above, it would undermine the Search and Surveillance Act's goal of consolidating police search powers. If a covert DNA sampling regime was inserted into the Search and Surveillance Act, cross-referencing to DNA legislation could be included to ensure that the preference for use of the direct suspect sampling regime was made clear.

Policy statement

9.73 Police could issue a policy statement governing indirect sampling to provide additional transparency. It could indicate best-practice approaches from a range of perspectives and establish a hierarchy of possible items that could be seized that may yield a biological sample capable of DNA analysis. For example, from a scientific perspective, a toothbrush is preferable to a hairbrush; from a privacy perspective, a toothbrush is preferable to underpants; from a tikanga perspective, samples of saliva are preferable to blood samples; from a wider systems perspective, medical samples should only ever be used as a last resort to avoid undermining valuable medical regimes (as we discuss further below).

9.74 A policy statement could be developed in partnership with Māori and with the involvement of the Privacy Commissioner and/or an oversight body with capacity to consider Treaty of Waitangi, NZBORA, tikanga and privacy issues. A policy statement could also help to explain the relationship between the CIBS Act and the Search and Surveillance Act if the search powers remain governed by the Search and Surveillance Act alone.

Supplementary auditing and/or reporting

9.75 Indirect suspect sampling squarely engages information privacy principle 2: Where an agency collects personal information, the agency shall collect the information directly from the individual concerned. It therefore might be appropriate for the Privacy Commissioner to have an auditing role to ensure that indirect suspect sampling is only undertaken in cases where it is justified.

9.76 Alternatively, reporting obligations in relation to indirect suspect sampling could be included in new legislation. An oversight body could then monitor any trends in the increased use of indirect, as opposed to direct, suspect sampling.

Q17

Instead of obtaining a reference sample directly from a suspect, do you think that a police officer should be able to seize a personal item belonging to the suspect or something that they have touched in order to compare it to a crime scene sample? If so, in what circumstances do you think this would be appropriate?

NEWBORN BLOOD SPOT CARDS

9.77 Additional legal and policy issues arise in relation to the use of biological samples that have been collected from the suspect for a different purpose, such as medical samples. Indirect suspect sampling that targets these samples has the potential to undermine the

purpose for which the sample was originally collected. A prime example of this is Police use of the blood spot cards that are stored by the Ministry of Health following newborn metabolic screening.

Background

9.78 The Newborn Metabolic Screening Programme was established in 1969 as a national programme to screen babies for certain serious metabolic disorders.[77] Early detection and treatment of these disorders is important in reducing morbidity and mortality.[78] The programme has a nearly 100 per cent population coverage, and approximately 45 babies each year are identified as having a disorder.[79]

9.79 To undertake the testing, a blood sample is collected, with parental consent, from the baby's heel onto a blood spot card. The card is sent to the laboratory for testing. The residual blood spot sample on the card is stored indefinitely unless the family requests its return. Usable DNA information can be obtained from the blood spot cards, so the stored cards provide a unique source of DNA information relating to hundreds of thousands of New Zealanders.

9.80 According to Ministry of Health information, the blood spot cards that are retained may be used for: [80]

(a) repeat testing;

(b) making improvements to the screening programme;

(c) investigating unexplained illness or death in a family/whānau;

(d) scientific research if that research is approved by an ethics committee and the Ministry of Health; and

(e) forensic use in identifying a deceased or missing person or assisting with enquiries such as identifying victims of a natural disaster or crime.

9.81 Forensic use of the blood spot cards is governed by a Memorandum of Understanding between Police and the Ministry of Health (the MOU).[81] In accordance with the MOU, Police may only seek access to newborn blood spot cards for:

(a) victim identification;

(b) cross matching of biological specimens from dead or missing persons;

(c) coronial inquiries; or

(d) otherwise if they apply for and obtain a search warrant.[82]

9.82 The MOU provides that Police can apply for a search warrant in the normal way to seize the biological sample on a blood spot card to create a DNA profile if they require it for

77 This includes cystic fibrosis, congenital hypothyroidism, congenital adrenal hyperplasia and severe combined immune deficiency.

78 When metabolic disorders are diagnosed early, treatment can be started straight away. This can reduce the chance that the baby will experience brain or other permanent damage, which in some cases can be life-threatening.

79 National Screening Unit "About the Newborn Metabolic Screening Programme" (1 December 2014) <www.nsu.govt.nz/>.

80 National Screening Unit "Frequently asked questions" <www.nsu.govt.nz/pregnancy-newborn-screening/newborn-metabolic-screening-programme-heel-prick-test/frequently-asked>.

81 New Zealand Police and Ministry of Health Memorandum of Understanding "The disclosure of newborn blood spot samples and related information" May 2014. <https://www.nsu.govt.nz/system/files/page/schedule_2._moh_and_nz_police_may_2014_0.pdf>

82 At [2.2].

"any criminal investigation other than one in which the request relates to a victim and is for the purpose of identification".[83]

9.83 The overriding principle enshrined in the MOU is that:[84]

> The blood spot card and information associated with it is collected for health purposes only. Any use of the blood spot card for any non-health related purposes is exceptional. The police should have recourse to the blood spot cards and associated information only rarely, and as a last resort.

T v R

9.84 The use of search warrants to obtain access to blood spot cards was discussed in the 2016 case of *T v R*.[85] This case involved a baby who was suspected to have been the product of incest. The baby died, and during the post mortem, a police officer asked the pathologist to obtain a biological sample to enable Police to check whether the baby was the product of incest. There was other evidence suggesting that incest had occurred, and Police had previously collected samples from both parents.[86] There was no suggestion that incest was relevant to the cause of the baby's death, and the parents successfully argued that Police and the pathologist had no authority to obtain a separate sample from the baby during the post mortem for the purpose of investigating the incest.

9.85 In its judgment, the Court of Appeal considered other lawful ways in which Police could have potentially obtained a biological sample from the baby for DNA analysis. The Court discussed obtaining a search warrant for biological samples that had been legitimately taken from the baby during the post mortem and obtaining a search warrant in respect of the baby's belongings in the house. The Court also discussed the possibility of obtaining a search warrant for the baby's blood spot card. Technically, if this had occurred, the blood spot card would not have been used to identify an otherwise unknown victim (as per the MOU) but would instead have been used to identify whether the baby was a victim. In effect, it would also identify the baby's parents as offenders. We note that, for this reason, incest cases are unusual in that the sample could be used to identify the victim or the suspect or both.

Issues

9.86 Putting to one side the issue of whether a search warrant is technically available under the Search and Surveillance Act, we have some concerns about Police using newborn blood spot cards in criminal investigations.

9.87 First, in terms of tikanga, some biological samples are more tapu than others. For example, a saliva sample taken from a toothbrush may not attract the same level of tapu as a personal or medical item with blood on it. The purpose for and circumstances in which a medical sample is taken may also impact on this, and birth, in particular, is a time

83 At [3.1.2(c)].

84 At [2.1].

85 *T v R* [2016] NZCA 148.

86 The parents already had one conviction for incest, which related to the baby's older sister. In light of that conviction, their DNA profiles were both on the known person databank. Accordingly, a DNA profile from the baby could have been uploaded onto the Crime Sample Databank, which would then have been compared to the known person databank to reveal the match. Alternatively, police officers could have applied for suspect compulsion orders under Part 2 of the Criminal Investigations (Bodily Samples) Act 1995.

of heightened tapu. Recognition of the cultural and spiritual implications of obtaining human tissue is also central to the philosophy behind the Human Tissue Act.[87]

9.88 Second, we share the concerns raised by the Privacy Commissioner about the impact that police use of newborn blood spot cards may have on public trust and confidence in the Newborn Metabolic Screening Programme.[88] We acknowledge that the Privacy Commissioner was consulted on the current MOU and that, in 2013, the Health Information Privacy Code was amended to improve protections around use of the cards.[89] Despite this, the National Screening Unit, which administers the screening programme, still has a number of concerns.

9.89 The Screening Unit's concerns relate to the prospect of a police officer obtaining a search warrant for a blood spot card for the purpose of identifying a suspect as opposed to a victim. The Unit is of the view that, if the public were aware that there is a mechanism by which Police could access the blood spot cards for this purpose, fewer people would consent to their babies participating in the Newborn Metabolic Screening Programme, thus jeopardising the societal utility that the screening programme brings. We understand that parents often ask the Unit about this possibility, which is why the Unit fears that this information may have an impact on consent, even though families are told that they may request to have the blood spot card returned following screening.

9.90 The Screening Unit is also mindful of events in Western Australia where, in 1997, a hospital destroyed its entire collection of blood spot cards following Police seizure of a card pursuant to a search warrant. Western Australia subsequently implemented a rule that blood spot cards must be destroyed after two years.[90]

9.91 While Police note that the circumstances in which it would consider the use of a blood spot card would be rare, it does consider that it is important to retain the ability to use the search warrant process to access blood spot cards to assist in identifying a suspect. In *T v R*, the Court of Appeal noted that it may not have been possible to be sure that any DNA obtained from the baby's belongings was definitely attributable to the baby, given the number of people living at the house. The Court commented that "issues of proof of whose bedding and whose clothing items could have arisen".[91] These comments suggest that, in the Court's view, where indirect suspect sampling is justified as a last resort in a case, a blood spot card may be the best source of DNA definitively attributable to the suspect.

Options for reform

9.92 Broadly speaking, there appear to be two options for reform: enshrine the MOU in legislation or prohibit the use of blood spot cards to identify suspects.

87 Human Tissue Bill 2007 (82-2) (explanatory note) at 3.

88 Marie Shroff "NZ Doctor Series – Privacy Matters (#32)" (25 April 2013) Office of the Privacy Commissioner <www.privacy.org.nz>.

89 See Health Information Privacy Code 1994 Amendment No. 7 (30 April 2013).

90 Department of Health Government of Western Australia "Your baby's newborn bloodspot screening test" <www.healthywa.health.wa.gov.au>.

91 *T v R* [2016] NZCA 148 at [60].

Enshrine the MOU in legislation

9.93 The MOU states that, to use a blood spot card in a criminal investigation (for a purpose other than identifying a victim), a police officer must obtain a search warrant, and this may only be done as a last resort. By giving the MOU legislative standing, the legal position would be clear and it would be easier for the Screening Unit to explain to parents. Judges would also be required to determine that other investigative avenues had been exhausted prior to issuing the warrant.

9.94 However, this option would not address the Screening Unit's concern that parents may refuse to let their babies be screened due to fears that the blood spot cards could later be used by Police to identify their child as a suspect in a future criminal investigation. It is likely to be extremely rare for Police to use the blood spot cards for this purpose, and potentially additional education around this could alleviate parental concerns. However, if the law enforcement need for this power is such a remote possibility, there is a question as to whether it needs to be available at all.

Prohibit use of the blood spot cards to identify suspects

9.95 Under this option, use of blood spot cards to identify a suspect would be prohibited, but the cards would still be available for the identification of victims in criminal investigations. We understand that this is usually dealt with by consent. This could be set out in a statutory provision to provide legal certainty and transparent assurance to participants in the screening programme.

9.96 A separate decision would need to be made in relation to incest cases, like *T v R*. In those cases, the reason for obtaining the blood spot card is to identify whether the child is a victim, but in doing so, the card identifies the suspect. As identification of the suspect is secondary, technically the card is not being used to the direct detriment of its "owner". The policy considerations in these cases are different.

9.97 This option would protect against any further decline in public confidence in the Newborn Metabolic Screening Programme. However, it is already used as a last resort and only with pre-approval from a judge in the form of a search warrant, and prohibition would remove an investigative tool from Police where there may be no other avenues.

Q18 Instead of obtaining a reference sample directly from a suspect, do you think that a police officer should be able to obtain access to the suspect's newborn blood spot card in order to compare it to a crime scene sample? If so, in what circumstances do you think that would be appropriate?

SEARCH POWERS RELATED TO DRUG AND ALCOHOL TESTING

9.98 Another biological sample that could be used by Police for indirect suspect sampling is the saliva or blood that is collected during breath or blood alcohol testing. Police might also obtain hair samples to test for exposure to drugs and routinely take fingerprints from people in custody for identification. These samples are scientifically capable of being analysed to create a DNA profile.

9.99 The New Zealand Court of Appeal touched on this issue in the 1992 case *R v Salmond*.[92] The Court held that the use of blood samples taken under the Transport Act 1962 must be confined to a purpose that served the object of the Act – road safety. This approach was discussed by the Supreme Court in *R v Ngan*, which noted that the court in *Salmond*:[93]

> may have been influenced by the fact that the taking of the blood sample ("a sensitive matter of great public concern because of the invasion of individual privacy and bodily integrity") was an action which would have been unlawful, a trespass to the person, if not authorised by statute for a limited purpose.

9.100 In light of *Salmond* and more recent jurisprudence around section 21 of NZBORA, we consider that, if a police officer obtained a biological sample from a suspect for one purpose, such as breath testing, and then used it to generate a DNA profile, that would probably amount to an unreasonable search.

9.101 However, we note that, in Australia, the courts have held that it was lawful for police officers to conduct a "random" breath test to obtain a reference sample from a suspect.[94] The court did state, however, that it would only condone the use of powers for an ulterior motive in exceptional cases. In the United States, the courts have also held that it was lawful to obtain DNA profiles from saliva left on police equipment following evidential breath tests.[95]

9.102 The current position whereby this would be unlawful in New Zealand seems appropriate and we are unaware of any law enforcement need to change this.

CLOSE GENETIC RELATIVES

9.103 Relatives share a similar genetic makeup. The closer the relation, the greater the amount of genetic material they will share. A family member of a suspect, for example, their parent, child or sibling, may consent to giving a sample if the suspect themselves is unavailable – for instance, if they have left the country. A DNA sample from a genetic relative could be used to inculpate or exculpate a suspect.[96]

9.104 Currently, there is nothing in the Act that prohibits Police obtaining a databank consent sample from a family member (under Part 3 of the CIBS Act). The DNA profile generated from that sample could then be uploaded to the known person databank and compared to the CSD. If there is a near match to the crime scene profile in question, it may implicate

92 *R v Salmond* [1992] 3 NZLR 8 (CA).

93 *R v Ngan* [2007] NZSC 105, [2008] 2 NZLR 48 at [36].

94 *R v Daley* [2001] NSWSC 1211.

95 *Tonto Corbin v State of Maryland* 428 Md 488, 52A 3d 946 (MD 2012): The Court held that the defendant, who was on probation for a drunken driving offence, had no legitimate expectation of privacy in DNA taken from saliva that he left on a straw in the course of complying with an alcohol monitoring programme. In *The People v Troy Corsby Thomas* 200 Cal App 4th 338, 132 Cal Rptr 3d 714 (Cal 2011), the Court held that the defendant had no privacy in a mouthpiece used for a breath test.

96 Obtaining a DNA sample from a close genetic relative of a suspect is distinct from the practice of familial searching, which is discussed in Chapter 13. Familial searching is when there is no suspect and all other leads in a case have been exhausted and a crime scene sample is then compared to the databank of known people. Both practices are based on the fact that siblings, parents and children will have genetic material in common.

the person's close relatives. We are not aware of this ever having occurred in New Zealand.[97]

Issues

9.105 The intrusion associated with the State obtaining a reference sample from a person who has no direct connection to the offence under investigation is a major issue. There could be significant privacy implications for the relative as well as for the suspect. Because DNA is shared by close relatives, use of this method raises questions around whose information a relative is giving, and it fails to address a collective interest in the DNA information. This has particular implications for Māori, currently over-represented in the criminal justice system and more likely to be adversely affected by use of discretionary powers. There are also tikanga and privacy concerns with the collective interest in whakapapa information.

9.106 There are also real questions around whether it is possible to give meaningful informed consent to such a process. We note that the situation may be different if a genetic relative is volunteering a sample in order to exculpate a relative. This may be a place for informed consent, but any consent process would need to be carefully considered in order to address concerns as to whose information is being volunteered. It is always possible that a well-intentioned relative may inculpate rather than exculpate a suspect. Informed consent is discussed in Chapter 8.

9.107 The relationship between this method of indirect sampling and the direct sampling methods in the CIBS Act is also unclear.

Options for reform

9.108 There are a number of options to address these issues:

(a) Prohibit sampling of genetic relatives: This option is clear and simple but may unnecessarily inhibit Police investigations where there are no other viable options.

(b) Permit such sampling as a last resort: As with other last-resort options, like the use of newborn blood spot cards, this could involve the need for a search warrant or an alternative approval process that could be developed in partnership with Māori in particular and enable cultural considerations to be taken into account. Approval could be given by an oversight body with the capacity to consider Treaty of Waitangi, NZBORA, tikanga and privacy issues.[98] This would mean that the collection and use of samples from close genetic relatives would be permitted on an individual case basis.

(c) Policy statements: This option would provide some clarity but would not provide the same level of clarity, safeguards or oversight that a warrant system or oversight body would provide.

97 As we note in Chapter 8, Police do obtain elimination samples from relatives of a missing person or for the purposes of identifying victims of disasters. However, these samples are not to be used for any other purpose.

98 Chapter 15 outlines various options for the establishment of such an oversight body and explores how it might operate in practice.

Q19 Instead of obtaining a reference sample directly from a suspect, do you think that a police officer should be able to obtain a reference sample from one of the suspect's close relatives in order to compare it to a crime scene sample? If so, in what circumstances do you think this would be appropriate?

GENEALOGICAL WEBSITES

9.109 It may be possible for police officers to find a lead in an investigation by matching publicly available DNA information, such as from a publicly available genealogical website, with DNA recovered from victims and crime scenes.[99] The finding of some shared genetic material between the two profiles may indicate a genetic relationship.[100]

9.110 There have been high-profile uses of this technique by law enforcement agencies overseas,[101] including the discovery of the identity of the "Golden State killer" in California in April 2018. The name was given to a serial killer, rapist and burglar allegedly responsible for at least 12 murders, more than 50 rapes and more than 120 burglaries from 1976 to 1986. It was not until years later that DNA methods connected the crimes to the same offender. The forensic DNA databases maintained by law enforcement did not contain the offender's profile. The task force hunting the offender uploaded a DNA profile from one of the crime scenes onto GEDmatch, a publicly available genealogy website launched in 2010.

9.111 GEDmatch is not a genetic testing service. Instead, its users upload a DNA profile already obtained from a commercial genealogy website.[102] The GEDmatch software then searches the database and finds other profiles that share some genetic material.[103]

99 See Chapter 13 for a discussion of familial searching, which uses a similar process but in relation to a search of the known person databank.

100 This process is similar to familial searching, which is discussed in Chapter 13 but with an important distinction. The genetic information contained in databases (such as the known person databank in New Zealand and those maintained by law enforcement authorities in other jurisdictions) is currently limited to a number of particular sites in the genome called STRs. This enables identification of only close relatives. Consumer genetics services by contrast use SNPs, which provide a greatly increased ability to identify genetic relationships. In contrast, as the Chief Science Officer of My Heritage put it, in an SNP database, "You are a beacon who illuminates 300 people around you": Benjamin Oreskes, Joseph Serna and Richard Winton "False starts in search for Golden State Killer reveal the pitfalls of DNA testing" *Los Angeles Times* (online ed, Los Angeles, 4 May 2018). See Chapter 3 for a discussion of both of these analysis techniques.

101 GEDmatch had already been a source of genetic leads for law enforcement who had sought help from genealogists to develop the information received. The "Buckskin girl" case in April 2018 involved the use of GEDmatch to identify a long-deceased homicide victim: DNA Doe Project "Buckskin Girl" (10 April 2018) <www.dnadoeproject.org>. Other cold cases since progressed in this way include investigations in Pennsylvania in June 2018 (the 1992 murder of Christy Mirack) and in Indiana in July 2018 (the 1988 murder of April Tinsley).

102 For example, Ancestry.com or 23andMe. Those commercial services state that they will not supply genetic information to law enforcement unless required by a court order, search warrant or subpoena: see the privacy statement for Ancestry.com at Ancestry "Your Privacy" (April 30, 2018) <www.ancestry.com> and for 23andMe at 23andMe "Privacy Highlights" <www.23andme.com>. Neither accept data from other sources, and both require clean saliva samples for testing which limits any potential use by law enforcement authorities. Both publish transparency reports annually that contain the number and status of law enforcement requests. Our research indicates that no successful requests have been made. In July 2018, the Future of Privacy Forum in cooperation with genetic testing companies published *Privacy Best Practices for Consumer Genetic Testing Services* (July 2018), described as a "policy framework for the collection, retention, sharing and use of Genetic Data generated by consumer genetic and personal genomic testing services": at 1.

103 GEDmatch requires the potential user seeking to upload their genetic data to register a name and email address (which will be visible in GEDmatch lists) and a password. The user then receives a confirmation email from GEDmatch and adds

9.112 In the Golden State killer case, GEDmatch found profiles that shared some DNA with the crime scene sample profile.[104] Law enforcement officers used this information to construct family trees and develop lists of possible suspects. Once they focused in on a key suspect, Joseph DeAngelo, enforcement authorities conducted surveillance on him and reportedly obtained DNA evidence from sweat left on his car door and from tissues discarded in his rubbish. He was arrested in April 2018 and is now awaiting trial on multiple murder and rape charges.

9.113 GEDmatch terms and conditions at the time contained no information about possible use of the database by law enforcement authorities. The privacy policy was amended in May 2018 and now expressly contemplates "[f]amilial searching by third parties such as law enforcement agencies to identify the perpetrator of a crime, or to identify remains".[105]

Issues

9.114 Concerns have been raised about the use of information from genealogical websites as an alternative to legislative schemes that regulate the use of DNA analysis for law enforcement purposes, for example, the genetic privacy implications since DNA is by its very nature shared information, the normalisation of the use of familial searching as an investigative tool without constraints and the fact that these databases hold much more comprehensive genetic information than forensic databases currently do and are not subject to legislative or other constraints in terms of collection of samples or searching.[106]

9.115 In New Zealand and overseas, use of genealogical websites for law enforcement purposes is currently unregulated.

9.116 As with asking a genetic relative to provide a reference sample, consent is a significant issue with indirect profile matching using genealogy websites. GEDmatch's privacy policy says its tools are "for comparison and research purposes" and "if you require absolute privacy and security, we must ask that you do not upload your data to GEDmatch". However, as New York University law professor Erin Murphy, who researches forensic technology, commented in a 2018 article in the *Washington Post*:[107]

> Even the people who consent by uploading their DNA often don't imagine the ways their information will be used. … They aren't really thinking through the implications of creating this treasure trove of data that can be mined … Even if [users are] content with making that trade-off with their personal data, they're also making that trade-off with their extended family, their children, their children's children … And they're not just making it for 2018, but for 2020 and 2040, when data from the genome could be used in all sorts of different ways.

the code supplied to complete registration and upload the data. The actual process is not completely clear in the absence of actual registration, but it appears that a user certifies that the DNA data was their own or belonged to someone for whom they were the legal guardian or that they had "obtained authorization" to upload the data. The user then attaches a DNA data file and sets privacy options. Results are processed and appear on the user's home page. See GEDmatch.com "Terms of Service and Privacy Policy" (20 May 2018) <www.gedmatch.com/tos.htm>.

104 At the time, GEDmatch contained nearly 900,000 profiles, which meant a search of the genetic information of a very large group of individuals but without any suspicion that a particular individual was connected to the particular crime.

105 GEDmatch.com "Terms of Service and Privacy Policy" (20 May 2018) <www.gedmatch.com/tos.htm>. It also advised users not to provide raw data or to remove data already provided if users found this use 'unacceptable'.

106 See Natalie Ram, Christi J Guerrini and Amy L McGuire "Genealogy databases and the future of criminal investigation" (2018) Science 360(6393) 1078 at 1078 and Erlich Y and others "Identity inference of genomic data using long-range familial searches" (2018) Science 362(6415) 690.

107 Justin Jouvenal and others "Data on a genealogy site led police to the 'Golden State Killer' suspect. Now others worry about a 'treasure trove of data'" *The Washington Post* (online ed, Washington, 27 April 2018).

Options for reform

9.117 There is little that can be done to regulate the privacy policies or informed consent procedures of a genetic information service such as GEDmatch based in another jurisdiction. The DNA information is generated lawfully by other people and is publicly available, so Police use of it probably would not amount to a "search" for the purposes of NZBORA either. It would be difficult to maintain a reasonable expectation of privacy in genetic data that is voluntarily shared.

9.118 The information privacy principles may apply though, meaning that again Police would need a reason not to opt for direct sampling and must collect the information by means that are fair and that do not intrude to an unreasonable extent upon the personal affairs of the individuals concerned.

9.119 Police has stated in response to the public interest created by the Golden State killer investigation that "Police has not and is not considering the use of genetic information contained on consumer genealogical websites".[108]

9.120 There may be benefits in Police developing a policy statement to explain to the public the circumstances in which this technique would ever be used. The statement could be developed in consultation with Māori, the Privacy Commissioner and/or an oversight body. Alternatively, an oversight body could be given a monitoring role to ensure that the collective privacy of individuals was being given adequate weight in making investigative decisions.

Q20 Do you have any concerns about Police using information that is publicly available on genealogical websites as an investigative tool to help identify potential suspects in criminal investigations?

[108] Deena Coster "Law commission review of DNA law will look at use of genealogical websites" *Stuff* (online ed, 12 August 2018).

Part C

The databanks

CHAPTER 10

Crime Sample Databank

10.1 The Institute of Environmental Research (ESR) maintains the Crime Sample Databank (CSD) on behalf of New Zealand Police. It contains DNA profiles generated from biological samples collected from crime scenes. The Criminal Investigations (Bodily Samples) Act 1995 (CIBS Act) clearly regulates the known person databank,[1] but the existence of the CSD is something that the reader can only infer.

10.2 In this chapter, we describe the CSD and how it is used and regulated. We begin by describing Police and ESR policies, agreements and practices that govern the CSD. We then discuss applicable legal principles, identify areas for improvement and suggest options for reform in order to:

(a) improve the accessibility and transparency of the CSD;

(b) ensure clarity around the criteria and processes for making the decision to upload a profile to the CSD; and

(c) have accountability mechanisms in place to measure the CSD's effectiveness.

POLICE AND ESR POLICIES, AGREEMENTS AND PRACTICES RELATING TO THE CSD

10.3 The section below describes Police and ESR policies, agreements and practices that govern the use of the CSD. The description is based on information and documentation provided to us by Police and ESR, including the Forensic Science Services Agreement between Police and ESR 2018–2021.[2] As some of these documents have been provided to us on a confidential basis or are commercially sensitive, we are unable to quote from them. We have provided references where possible. We have also relied on the PhD dissertation of Catherine Gardner: "Does Police Culture Prevent the New Zealand Police from Making the Best Use of DNA Technology to Investigate Crime?"[3]

When do Police send crime scene samples to ESR for analysis?

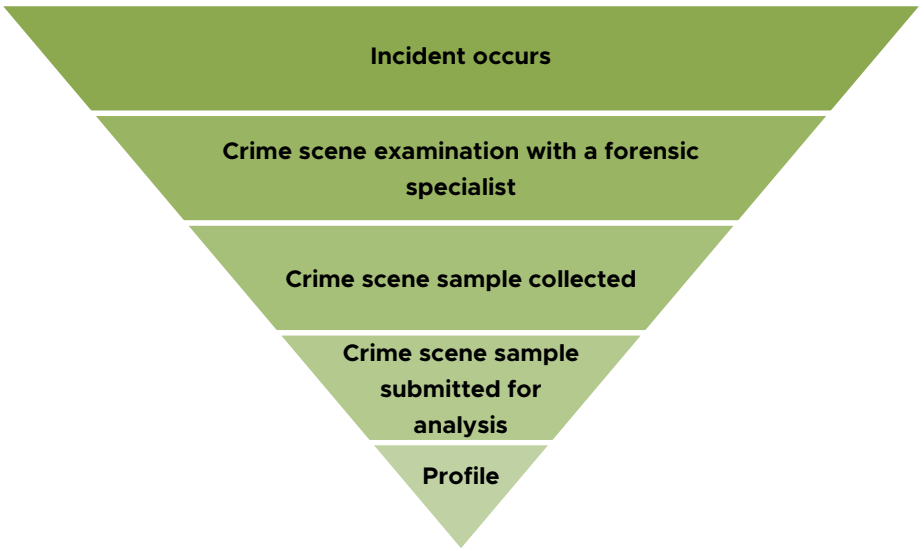
10.4 Not all criminal investigations involve a crime scene examination, and not all crime scene examinations result in biological samples being sent to ESR for analysis. There is a significant difference between the overall number of incidents that occur and the number

1 The known person databank is discussed in Chapters 11, 12 and 13.

2 See Key terms and actors at the beginning of the issues paper for discussion of this agreement.

3 Catherine Gardner: "Does Police Culture Prevent the New Zealand Police From Making the Best Use of DNA Technology to Investigate Crime?" (PhD Dissertation, Auckland University of Technology, 2014). Gardner is a Police employee.

of cases in which a usable DNA profile is generated. This number diminishes at each step in the process, as illustrated below:[4]



Categories for analysis: "non-suspect volume crime" and "priority crime"

10.5 If a decision is made to send crime scene samples to ESR in a particular case, the case will be categorised as either "non-suspect volume crime", for which a fast-track service is available, or "priority crime". Volume crime is the term used to describe general theft, burglary or vehicle crime. (Vehicle crime includes unlawful taking of, and theft from, vehicles.) Non-suspect volume crime refers to cases of volume crime where police officers do not have a reference sample from a suspect for analysis. Priority crime refers to all other cases where crime scene samples are sent to ESR for DNA analysis, including sexual and violent offences.

10.6 Over 98 per cent of the profiles currently on the CSD relate to individuals. These are known as single contributor DNA profiles. The remaining profiles relate to multiple people.[5] Most of the cases that Police refer to ESR for DNA analysis involve non-suspect volume crime. At present, 77 per cent of the single contributor DNA profiles on the CSD relate to cases of non-suspect volume crime. For non-suspect volume crime, Police has agreed to limit the number of samples it sends for analysis in each case to five or fewer. As a result, although the priority cases are fewer in number, they take up more of ESR's time because there is no limit on the number of samples Police may ask ESR to analyse.

When does ESR upload DNA profiles to the CSD?

The quality threshold for single contributor DNA profiles

10.7 Due to the variable nature and quality of crime scene samples, it is common for ESR to only be able to generate a partial DNA profile from the sample. Therefore, having a quality threshold is very important.

4 Crime scene examinations are discussed in more detail in Chapter 5.

5 These profiles are generated from mixed crime scene samples that could not be resolved using STRmix (a software program). A more detailed explanation of mixed crime scene samples and STRmix can be found in Chapter 3.

10.8 If the quality threshold was not met and, for example, a profile with only one STR was uploaded to the CSD, this may result in matches to hundreds of other profiles on the CSD and the known person databank. This information would be of little practical use to police officers or, in the worst-case scenario, could lead to a false positive or adventitious match (that is, a match to the profile of a known person who had the same STR but was not the owner of the profile).[6]

10.9 ESR has a policy of strongly recommending that no single contributor[7] crime scene profile is uploaded to the CSD unless it meets the quality threshold of a minimum number of STRs or alleles.[8] These STRs or alleles must have a sufficiently high degree of cross-over with the STRs targeted by the analysis kits ESR has previously used.[9] This ensures that meaningful comparisons can be made to other profiles, including profiles from cases where older analysis kits were used.[10]

10.10 At 30 June 2019, there were 40,553 single contributor crime scene profiles on the CSD. It is clear from data provided to us by ESR that the vast majority meet the quality threshold. Table 1 shows the types of DNA analysis kits that were used to generate these profiles, the maximum number of alleles that a kit could analyse if the samples had been of good quality (not degraded) and how many alleles were present in the actual crime scene profiles that were uploaded.

Table 1: Quality of DNA profiles on the CSD

DNA ANALYSIS KIT USED	NUMBER OF PROFILES ON THE CSD	NUMBER OF ALLELES POSSIBLE	RECOMMENDED QUALITY THRESHOLD	RANGE OF ALLELES	AVERAGE NUMBER OF ALLELES
SGM	824	14	N/A	10–14	13.7
SGMPlus	18,950	22	10	10–22	21.4
Identifiler	20,090	32	15	7–32 (although only two have fewer than 10)	30.6
Globalfiler	688	46	N/A	24–46	44.4

6 As noted in Chapter 3, by "adventitious match" or "false positive", we mean that, purely by chance, the STRs in both profiles (the crime scene profile and the DNA profile of the known person) are the same at each locus tested – yet the crime scene profile did not come from the known person but from a different person. This is possible within a large population group. As the number of loci tested has increased, the risk of adventitious matches has reduced. However, if a crime scene profile is degraded or partial, this increases the chance of an adventitious match.

7 A "single contributor profile" is where the crime scene profile only contains the DNA of one person (whose identity is at that point unknown). This is as opposed to mixed crime scene profiles.

8 An allele is one of many forms that a genetic marker at a particular locus may take. In the context of STR profiling, this is the difference in the number of repeats of the DNA sequence at that locus. The data (for any given person) typically shows two allele sizes (shown as numbers) at each locus: one allele contributed by the person's biological mother and the other allele contributed by the biological father. STRs are described in more detail in Chapter 3; see also the Glossary at the beginning of this issues paper. A different quality threshold applies for unresolved mixed crime scene profiles, as we explain further at [10.24] to [10.28].

9 That number depends on the type of kit that is used. The Identifiler kit is usually used to analyse crime scene samples. ESR currently uses the Globalfiler kit to analyse samples from known persons.

10 The different kits that have been used by ESR over time are explained in more detail in Chapter 3.

10.11 ESR has advised us that it very rarely uploads DNA crime scene profiles to the CSD that do not meet the quality threshold. We understand that this only occurs where ESR and Police have carefully considered the merits of this approach, in light of the quality of the particular crime scene profile and the overall circumstances of the case. ESR explained that the profile is uploaded to the CSD, compared to the other profiles on the known person databank and then immediately removed. This means that ESR in effect undertakes a one-off comparison between the crime scene profile and the databank in these cases, rather than storing the profile on the CSD.

Non-suspect volume crime cases – the fast-track service

10.12 The fast-track service that ESR offers for non-suspect volume crime cases involves analysing the crime scene sample, uploading any resultant profile to the CSD, looking for a match within the CSD or with a profile on the known person databank and reporting the results back to Police within five days. ESR has established three criteria for the analysis request to qualify for this service:

(a) It must be a volume crime case.

(b) Police cannot submit a reference sample from a suspect at the same time.

(c) There must be no more than five crime scene samples related to the case submitted for analysis.

10.13 With non-suspect volume crime cases, if ESR's quality threshold for a crime scene profile is met, the profile is automatically uploaded to the CSD.

Priority crime

10.14 All other criminal cases in which samples are sent to ESR for DNA analysis are categorised as priority crime. These are predominantly cases involving violent and sexual offending or volume crime cases where a reference sample has been obtained from a suspect. For priority crime, the decision whether to upload a single contributor profile to the CSD is made by ESR using internal guidelines. The guidelines establish two criteria for making this decision:

(a) The quality threshold must be met.

(b) The profile must be probative in nature.

ESR's assessment of the second criteria is based on information provided by Police regarding the circumstances of the case.

Looking for and reporting matches

10.15 If a decision is made to upload a single contributor DNA profile to the CSD, the first step is for an ESR scientist to compare the profile to elimination profiles obtained from investigators. This step is designed to swiftly identify any profile that may be the result of accidental contamination of the crime scene sample.[11]

10.16 ESR maintains two elimination databanks for this purpose. One contains profiles from ESR staff and people who have visited ESR's forensic laboratories. The second is the Police

[11] As we discussed in Chapter 7, the advent of trace DNA analysis means that crime scene profiles can now be generated from items that people have merely touched at crime scenes. This means that, even if samples are handled carefully, contamination is possible.

Criminal Investigators Elimination Database (CIED).[12] This contains profiles from Police employees and other forensic practitioners.

10.17 In addition to these two databanks, elimination samples may be submitted to ESR for analysis in relation to specific cases.[13] These elimination samples could be from investigators or other people who have had legitimate access to the crime scene, such as a complainant or victim, or third parties – for instance, consensual sexual partners, family members or flatmates.

10.18 If there is a match between a new crime scene profile and a profile on the ESR or Police CIED, the new profile is 'quarantined' and not uploaded to the CSD. Quarantined profiles are investigated at a later date. New profiles that match any elimination sample sent to ESR for analysis in relation to the specific case are also set aside. Only profiles that do not match any elimination profiles are uploaded to the CSD.

10.19 After uploading the single contributor profile, ESR runs a comparison of the new profile against the other profiles already on the CSD. If there is "correspondence" between the new profile and any existing profile on the CSD, an internal report is generated. ESR will then run a comparison between the CSD and the known person databank. Again, if there is a correspondence between the new profile and a profile on a known person databank, another internal report is generated.

10.20 At the end of this comparison process, the scientist prints out, examines and codes each internal report. Broadly, ESR's internal coding options are as follows:[14]

- Confirmed match: This is used when all the STRs match between the new single contributor crime scene profile and the other profile. If one or both of those profiles is a partial profile (that is, only some of the STRs are present), the result will be reviewed to consider its evidential value. This involves looking at the number of STRs shared and their frequency in the general population as well as other information on the file. If it is decided that there is some evidential value, it will be coded as a 'confirmed match'.
- No Match: This indicates the correspondence is a mismatch or, in the case of a crime scene to crime scene comparison, has been assessed as being of low evidential value.[15]

12 Section 82 of the Policing Act 2008 provides that Police employees and associates may voluntarily provide a biological sample for DNA profiling. The Policing Act does not, however, expressly mention the Police Criminal Investigators Elimination Database (CIED). Section 83(2) sets out restrictions regarding the use of a DNA profile obtained pursuant to section 82. The Police Manual states it must be used only for matching against other information held by Police for the purpose of eliminating the person from being considered in the investigation of crime and the profile is not admissible in evidence in any proceedings against the person even after they cease to be a Police employee or Police associate. The providing of samples for inclusion on the CIED is voluntary. Police employees and other selected forensic practitioners (such as pathologists) have two options: to provide an elimination sample for a specific case or for inclusion on the CIED for comparison against future cases. There is a right to withdraw consent. If an individual withdraws consent or leaves Police, the DNA profile and related information will be removed from the elimination database. Police Manual *DNA Sampling* at 49.

13 See the discussion of elimination samples in Chapter 8.

14 This is the broad process but does not cover all scenarios and aspects that an ESR scientist may take into account.

15 ESR has told us that an assessment of "low evidential value" would only ever occur with a crime scene to crime scene correspondence (when there is limited information present in the profiles) and not when the known person databank is involved.

- **Possible primer binding mutation**: This is used when the STRs are almost identical but vary by one allele at one locus point. This appears to be a technical difficulty that occurs sometimes when different kits have been used to generate the profiles.[16]

10.21 At the end of the coding process, ESR will generate a databank link report for all of the confirmed matches. ESR will then send the link reports to Police's district forensic intel email mailboxes and to the officer in charge of the relevant investigation. The link reports are then reviewed, and police officers are tasked to undertake further inquiries where appropriate.

Removal of profiles from the CSD

10.22 Generally, all profiles uploaded to the CSD will remain on the databank indefinitely – regardless of the outcome of the associated case.[17] This means that, even if a case is resolved – including if a decision is made not to lay any charges – the crime scene profile will continue to be compared to all profiles that are subsequently uploaded to the CSD and to the known person databank indefinitely.

10.23 There are two exceptions to this. First, as discussed at [10.11], ESR will remove a crime scene profile immediately after conducting a one-off comparison process if the profile was below the quality threshold but the comparison was nonetheless considered useful. Second, Police may ask ESR to remove a profile if it is later discovered that the profile belongs to a person who legitimately had access to the relevant crime scene – for example, the victim, a third party or an investigator. We understand, however, that such requests are rare.

Mixed crime scene profiles

10.24 As discussed in Chapter 3, approximately half of all crime scene samples analysed by ESR contain DNA from more than one contributor. ESR's policy is that mixtures that contain DNA from up to four contributors can be resolved using a software program called STRmix and that the resultant profiles can be uploaded (as single contributor profiles) to the CSD. However, some mixtures cannot be fully resolved, and the mixture may be uploaded to the CSD as a mixed crime scene profile.

10.25 STRmix software is then used to compare each profile on the known person databank to each of the mixed crime scene profiles. The program calculates how likely it is that each known person was one of the contributors to each mixture. This results in a match likelihood ratio. If any match likelihood ratio between a known person and a mixture is over 1:1,000,000, a link report is generated and sent to Police in the same way as link reports generated in relation to single contributor DNA profiles.

10.26 If a match likelihood ratio in any given case is less than 1:1,000,000, ESR may still decide to provide a link report. This decision will depend on the exact match likelihood ratio and all of the circumstances of the case. If such a link report is supplied, ESR's policy is to include in the report a warning about the risk of a false positive or adventitious match – put simply, a chance match to the wrong person.[18]

16 The different kits used by ESR to analyse biological samples to generate DNA profiles are described in more detail in Chapter 3.

17 Police Official Information Act response at [32]–[33] in *Police v SJ* [2017] NZDC 17314, [2018] DCR 587.

18 As noted in Chapter 3, by "adventitious match" or "false positive", we mean that, purely by chance, the STRs in both profiles (the crime scene profile and the DNA profile of the known person) are the same at each locus tested – yet the

10.27 ESR began uploading unresolved mixed crime scene profiles to the CSD in 2013. There are now 673 mixed profiles on the CSD, 68 per cent of which relate to priority crime and 32 per cent to non-suspect volume crime.

10.28 The links generated from mixed crime scene profiles are not taken into account in calculating the link rate, which is used to measure the effectiveness of the CSD. The link rate is discussed further below.

POLICE USE OF THE CSD

10.29 Since 2005, ESR has sent between 1,300 and 3,400 link reports to Police each year.[19] The number of links reported each year is recorded in Police annual reports.[20] However, Police does not routinely monitor what happens after it receives the link reports. This means that, while it is clear how many investigative leads are generated using the CSD, it is not clear to what extent those leads are of value in resolving criminal investigations.

10.30 A PhD dissertation submitted in 2014 aimed, in part, to address this gap in the available data.[21] The dissertation, undertaken by a Police employee, involved an analysis of all available case files in the Auckland City District from 2005 where DNA was found at the crime scene and ESR reported a match to Police[22] – 302 case files met the applicable criteria but only 146 were available to be used in the research. The dissertation also drew on interviews with 27 Police employees of varying levels of seniority and an ESR employee.

10.31 Despite its age, this research (which we refer to as the Auckland City District Study) remains the most comprehensive data available. We understand that, although changes have been made to the CIBS Act and to Police policies in the intervening years, many of the problems identified are likely to be same today. This conclusion is supported by an internal follow-up study Police conducted in 2017. As a consequence, Police has established a National Clearances Steering Group to improve case clearances and resolutions.

The Auckland City District Study

10.32 The Auckland City District Study illustrates how DNA is only collected from a small percentage of crime scenes, and even when it is collected, a DNA profile created and a link report generated, ESR's identification of a suspect may not result in apprehension of the offender. The overall picture that emerged from the 146 cases is illustrated in Table 2.

crime scene profile did not come from the known person but from a different person. This is possible within a large population group. As the number of loci tested has increased, the risk of adventitious matches has reduced. However, if a crime scene profile is degraded or partial, this increases the chance of an adventitious match.

19 For exact figures, see Chapter 11.

20 Pursuant to subsections 76(1)(ee), (ed), (g) and (h) of the Criminal Investigations (Bodily Samples) Act 1995, Police must report on how many times in a given year there have been matches (links) between DNA profiles obtained under different Parts of the Act and crime scene profiles.

21 Catherine Gardner "Does Police Culture Prevent the New Zealand Police From Making the Best Use of DNA Technology to Investigate Crime?" (PhD Dissertation, Auckland University of Technology, 2014).

22 In most of these cases, it appears that the CSD was involved. At the time, there seems to have been a policy of automatically uploading a crime scene profile to the CSD if it met the quality threshold, despite the facts of any particular case. However, in some cases (particularly the sexual and violent cases), the match may have been independent of the CSD, that is, the match was between the crime scene sample and a reference sample provided by the suspect. It is not possible to tell from the wording used in the thesis.

Table 2: Reported crime in Auckland city district 2005

OFFENCE TYPE	TOTAL NUMBER OF REPORTED CRIMES IN THE SUBJECT DISTRICT	NUMBER OF CASE FILES THAT INVOLVED A DNA MATCH AND WERE AVAILABLE FOR ANALYSIS	NUMBER OF CASE FILES WHERE CHARGES WERE LAID
Theft from car, general theft and criminal damage	9,589	11	6
Burglary	8,920	84	51
Violent offences	5,031	10	6
Unlawful taking or getting into a motor vehicle	4,423	33	11
Sexual offences	328	7	4[23]
Other (DNA not relevant)	25,324	1	0
Total	**53,615**	**146**	**78**

10.33 From the information in this table alone, it appears that DNA profiling only led to charges being laid in just over 0.1 per cent of the investigations in Auckland city district in 2005. However, because 156 of the files involving DNA profiling were not available for analysis, the figure is likely to be higher.

10.34 To understand what was happening in the available cases, the Auckland City District Study broke the investigation process down into four stages:

(a) Crime scene attendance.

(b) Submission for analysis.

(c) Identification of a match.

(d) Detection of the potential offender.

10.35 The study found that the weak point in the investigative process in New Zealand was between stage three (identification of a match) and stage four (detection of the potential offender). In 68 of the 146 cases where there was a link report, no charges were laid. Even more significantly, in 55 of those 68 cases, the potential offender was never interviewed by Police about the match, despite being in police custody in the intervening period.

10.36 The Auckland City District Study put forward several possible reasons for police officers not following up on link reports:[24]

[23] In an additional case, the DNA link report exonerated the suspect as the crime scene sample linked to another person (the victim's consensual sexual partner).

[24] Catherine Gardner "Does Police Culture Prevent the New Zealand Police From Making the Best Use of DNA Technology to Investigate Crime?" (PhD Dissertation, Auckland University of Technology, 2014) at ch 4.

- Limited effort employed by police officers to locate and/or interview the suspect, particularly if the case involved volume crime. This was thought to reflect a number of factors, including the limited resources of Police, the priority placed on sexual and violent offending and on responding to urgent call-outs, the complexity of the CIBS Act and the amount of administration associated with DNA cases.
- Poor administrative processes, including being unable to locate the relevant file and insufficient additional information being available on the file to enable a police officer to conduct an appropriate interview. It is noted that Police have introduced new file management systems since 2005, which may have rectified some of these problems.
- Many of the link reports related to victims and people with legitimate reasons for being at the crime scene.

10.37 In addition, the Auckland City District Study noted that, in several instances, the link report made little difference to the outcome of the investigation. Some offenders had been apprehended at the scene of the offence (meaning their presence at the crime scene was already confirmed), and others had pleaded guilty at the outset.[25]

10.38 The author commented:[26]

> The difference between the ESR identifying a potential offender and the offence being resolved is still great. The real challenge is establishing the number of files resolved due to the use of DNA evidence and it is this information that tends to elude the police.

APPLICABLE LAW

10.39 As noted, the CSD is not mentioned in the CIBS Act or any other legislation. Further, given that the CSD is purely an investigative tool,[27] there is very little case law that expressly refers to it. However, the CSD was the focus of a 2017 District Court case: *Police v SJ*.[28]

25 The Auckland City District Study contains 12 illustrative case studies. This includes 10 of the 17 case files concerning violent and sexual offending. Three are of particular note here. **Aggravated robbery** – The offender in this case was apprehended at the scene of the offence. When he was interviewed by Police, he admitted to the offending. A month later, investigators received a report from ESR linking the offender to the crime scene. **Wounding with intent to cause grievous bodily harm** – The complainant in this case was severely beaten by a man he knew. There were several witnesses to the incident. The offender surrendered to Police the following day. He pleaded guilty to the assault. It appears that, following his conviction, the offender provided a biological sample for the known person databank. When ESR uploaded the resultant profile to the known person databank and ran their routine check against the CSD, the offender's profile matched the crime scene profile from the original assault. This link did not assist Police as the offender had already been convicted of the assault. **Burglary** – This case file related to a prolific burglar whose offending spanned from 1997 to 2001. There were 98 related files. He was charged with 26 counts of burglary on 23 January 2001, seemingly after being apprehended at the scene of an offence. The Crown case consisted of CCTV footage, eyewitness accounts and fingerprint evidence. He pleaded guilty to the charges. In June 2001, ESR sent Police a databank link report linking the offender to 15 of the burglaries.

26 Catherine Gardner "Does Police Culture Prevent the New Zealand Police From Making the Best Use of DNA Technology to Investigate Crime?" (PhD Dissertation, Auckland University of Technology, 2014) at 87.

27 A match between the crime scene profile and the known person databank cannot be presented as evidence in Court (section 71 of the Criminal Investigations (Bodily Samples) Act 1995). Instead, after a suspect has been identified based on a link report, a police officer will obtain a reference sample from the suspect (either by consent or compulsion) under the Criminal Investigations (Bodily Samples) Act 1995. The comparison between the crime scene sample and the reference sample then forms the basis for the ESR scientist's evidence in court.

28 *Police v SJ* [2017] NZDC 17314, [2018] DCR 587.

Police v SJ

10.40 *Police v SJ* focused on decisions to upload and retain a crime scene profile on the CSD. The case related to two different incidents: a burglary in 2015 (the 2015 burglary) and an alleged rape in 2014 (the 2014 rape allegation).

10.41 In July 2015, a house was burgled. The offender broke a window, entered a house and stole two laptops. During the crime scene examination, police officers found blood on the window sill and obtained a biological sample for analysis. The resultant crime scene profile did not match any profiles on the known person databank, but it did match another profile on the CSD. The matching profile on the CSD had been obtained in relation to an allegation of rape from more than a year earlier when SJ was 15 years old.

10.42 In 2014, a 15-year-old girl had complained to Police that she had been raped by SJ the previous night. As is standard practice, a specialist doctor medically examined the complainant after her initial Police interview. During that examination, the doctor obtained a biological sample from a semen stain on her underwear. An ESR scientist later extracted male DNA from this sample and was able to generate a DNA profile. This profile was uploaded to the CSD but did not match any other profiles on the CSD or the known person databank at that time.

10.43 In the meantime, a police officer spoke to SJ who admitted to consensual sex with the complainant but declined to provide a reference sample or make a formal statement. After further inquiries, police officers decided to discontinue the investigation. The officers considered that the complainant was not a credible witness and there was insufficient evidence to prosecute SJ.

10.44 After the link between the 2015 burglary and the 2014 rape allegation was identified, a police officer asked SJ to provide a suspect sample by consent in relation to the burglary. SJ refused. A police officer then applied to the District Court for a suspect compulsion order under Part 2 of the CIBS Act. The only evidence put forward by Police in support of the application was the link between the crime scene profile from the 2015 burglary and the profile generated in relation to the 2014 rape allegation.

The Court decision

10.45 The Judge accepted that there was good cause to suspect that SJ had committed the burglary and that the seriousness of the offending and the reliable nature of the evidence weighed in favour of granting the application. He further noted that there was no suggestion that investigators had acted in bad faith or engaged in misconduct.

10.46 The Judge observed, however, that there were "aspects of the application which give rise to a real sense of unease".[29] Specifically:

- In relation to the 2014 rape allegation, there was insufficient evidence that an offence had occurred and so the evidence suggested that SJ "legitimately had access to the crime scene".[30] As a result, retention of the profile may have been inconsistent with Police policy, which required the investigating officers to ask ESR to remove that crime scene profile from the CSD when they decided to close the investigation

29 *Police v SJ* [2017] NZDC 17314, [2018] DCR 587, at [30].

30 At [34].

without laying charges. If that profile had been removed, there would have been no evidence linking SJ to the 2015 burglary.

- When investigating the 2014 rape allegation, it might have been possible for officers to have obtained a biological sample from SJ by compulsion under either Part 2 or 2B of the CIBS Act. However, even if that had occurred, the CIBS Act would have required the resultant profile to be destroyed once the officers decided not to lay any charges against SJ. Again, if this had occurred, there would have been no evidence linking SJ to the 2015 burglary.

10.47 His Honour concluded that, in all the circumstances of the case, it would not be reasonable to grant the application for the suspect compulsion order. The Judge stated that any collection of a biological sample from a person is a significant intrusion on the privacy rights of the individual. The intrusion would be even more significant in SJ's case because of his age and the fact that he had never provided such a sample to Police before. The Judge also commented that compelling SJ to provide the suspect sample would amount to an unreasonable search and seizure under section 21 of the New Zealand Bill of Rights Act 1990 (NZBORA).[31]

The Privacy Act 1993

10.48 The "unease" felt by the District Court Judge in *Police v SJ* stemmed largely from Police retaining the crime scene profile from the 2014 rape allegation for longer than necessary, given that the investigation was quickly resolved.

10.49 As we explained in Chapters 6 and 7, we consider that crime scene profiles are "personal information" for the purposes of the Privacy Act 1993. Therefore, the information privacy principles in that Act apply. This includes principle 9, which states: "An agency that holds personal information shall not keep that information for longer than is required for the purposes for which the information may lawfully be used".[32]

10.50 The following information privacy principles are also of particular note:

- Principle 1: Personal information shall not be collected by any agency unless: (a) the information is collected for a lawful purpose; and (b) the collection is necessary for that purpose.
- Principle 8: An agency that holds personal information shall not use that information without taking such steps (if any) as are, in the circumstances, reasonable to ensure that, having regard to the purpose for which the information is proposed to be used, the information is accurate, up to date, complete, relevant, and not misleading.
- Principle 10(1)(c): An agency that holds personal information that was obtained in connection with one purpose shall not use the information for any other purpose unless the agency believes, on reasonable grounds, that non-compliance is necessary to avoid prejudice to the maintenance of the law by any public sector agency, including the prevention, detection, investigation, prosecution, and punishment of offences.

31 At [38].

32 Privacy Act 1993, s 6.

IS THERE A NEED FOR REFORM?

10.51 We consider that there is room for considerable improvement in the way the CSD currently operates. Specifically we are concerned with the following:

(a) The law and policies governing the CSD are not accessible or transparent.

(b) Profiles are being uploaded to the CSD, even when there is no case-specific reason to do so, for instance, in cases like the 2014 rape allegation in *Police v SJ* where the identity of the alleged offender is known from the start of the investigation.

(c) Profiles are being uploaded to the CSD that belong to victims and third parties as well as potential offenders. To a certain extent, this is unavoidable, but additional safeguards should be put in place to reduce the likelihood of this occurring and to ensure consistency with NZBORA and the Treaty of Waitangi.

(d) Link reports that are issued in respect of lower-level offending may not be followed up by police officers for a variety of financial and administrative reasons.

(e) Profiles are being retained on the databanks for longer than is necessary to achieve the original purpose of their collection.

(f) There are insufficient accountability mechanisms in place, as data is not being routinely collected to monitor the effectiveness of the databanks.

10.52 The remainder of this chapter discusses each of these issues alongside the options for reform.

ACCESSIBILITY AND TRANSPARENCY

10.53 One of the most significant problems with the current CIBS Act is that it only tells part of the story about the use of DNA in criminal investigations in New Zealand. It clearly regulates the known person databank, but the existence of the CSD is something that the reader can only infer. Further, the Act contains no indication that ESR uploads mixed crime scene profiles or maintains elimination databanks. This creates uncertainty for Police and ESR and lacks transparency, which could impact on public trust.

10.54 One way to address these concerns is to include provisions governing the CSD and elimination databanks in any new legislation enacted to replace the CIBS Act. There is, however, considerable room for debate as to how prescriptive any provisions should be.

The tension between certainty and flexibility

10.55 Highly prescriptive statutory rules governing the CSD would promote certainty and accessibility but could stifle the ability to capitalise on developments in DNA profiling technology.

10.56 The use of mixed crime scene profiles is a prime example. If the CIBS Act had contained detailed rules around the structure of the CSD and permissible matching with the known person databank, these might have prevented the use of STRmix to generate investigative leads in cases that would otherwise have stalled. On the other hand, STRmix uses algorithms to calculate match likelihood ratios. At present, there is considerable public concern and debate around the use of algorithms in public sector decision making,

particularly in the area of criminal justice.[33] As discussed in Chapter 5, we do not have concerns about the scientific validity of STRmix, but greater transparency and oversight around these practices would provide reassurance to the public.

10.57 Another example of this tension are two proposals that ESR has put forward to Police:

(a) To upload Y-STR profiles to the known person databank.

(b) To upload Y-STR profiles to the CSD.

Police has declined the first proposal but has recently agreed to the second.

10.58 At present, the profiles on the known person databank and the CSD are generated using traditional STR profiling. As discussed in Chapter 3, traditional STR profiling focuses on the autosomal chromosomes, which are found in all humans. By contrast, Y-STR profiling targets the Y chromosome, which is generally only found in males. One of the main benefits of this kind of profiling is that it can be used to isolate male DNA from female DNA in a mixed crime scene sample. Therefore, it is particularly useful in sexual assault cases where the complainant is female and the alleged offender is male. By focusing only on the Y chromosome in such cases, it is often possible to generate a Y-STR profile that relates only to the alleged offender.

10.59 ESR routinely generates Y-STR profiles when analysing crime scene samples in casework. These profiles can easily be stored on the CSD, and since Police gave approval, ESR has started to add Y-STR profiles to crime scene samples being uploaded to the CSD. This enables ESR to look for Y-STR profile matches between different crime scenes samples on the CSD.

10.60 As noted above, Police did not approve ESR's proposal to conduct Y-STR analysis on samples obtained for the known person databank (and from there upload the profiles to the known person databank). However, were this agreed to in the future, ESR could look for Y-STR profile matches between the CSD and the known person databank as well. We understand that some jurisdictions in the United Kingdom and Australia are already experimenting with including Y-STR profiles on crime scene and known person databanks.

10.61 The inclusion of Y-STR profiles on the known person databank could also facilitate forensic DNA phenotyping[34] and familial searching.[35]

10.62 Arguably, there is nothing in the CIBS Act that would prevent Police from having ESR routinely include Y-STR profiles on the known person databank. Indeed, as noted, Police has approved their inclusion in respect of the CSD. The absence of statutory regulation enables this flexibility. However, the lack of Parliamentary mandate and oversight is troubling.

10.63 The Y chromosome passes down the male line largely unchanged. This means that close male relatives will often have the same Y-STR profile. As such, Y-STR profiles are nowhere near as efficient at distinguishing between individuals as traditional STR profiles. While for traditional STR profiling the likelihood ratios are often in the range of 1:1 million

33 See for example Vanessa Blackwood "Algorithmic transparency: what happens when the computer says no?" (29 November 2017) Privacy Commissioner <www.privacy.org.nz>; The Chief Archivist's Report on the State of Government Recordkeeping: Managing public sector information and data and why it matters (2016-2017) (Archives New Zealand, 7 March 2018) at 15–16; and Clare Curran and James Shaw "Government to undertake urgent algorithm stocktake" (press release, 23 May 2018).

34 Discussed in Chapter 6.

35 Discussed in Chapter 14.

or 1:1 billion, the highest recorded likelihood ratio for matching Y-STR profiles in New Zealand is currently 1:430, so there appears to be a risk of policing families as opposed to policing individuals. Potentially this issue could be addressed by placing rules around uploading profiles to the CSD and how information about a match could be used by Police. However, again, the ethical concerns highlight why additional statutory controls could be beneficial.

The crime scene index model

10.64 As indicated in Chapter 4, we can see the benefits of the DNA database model that has been adopted in Canada, Ireland and Australia. In each of those countries, the legislation governing the use of DNA in criminal investigations establishes a DNA database system consisting of multiple indices, including a crime scene index and – in the case of Ireland – multiple elimination indices containing profiles from investigators.[36] The legislation then places strict rules around what matching is permissible within and between the indices.

10.65 Whether it is called a crime scene index or a crime scene databank, the important point is that Canada, Ireland and Australia all recognise and define the crime scene index in legislation. By way of example, the Irish legislation states that the crime scene index:[37]

> … shall comprise the DNA profiles of persons generated from samples of biological material found at, or recovered from, a crime scene whether before or after the commencement of this section.

10.66 The definition of "DNA profile" in the Irish legislation is broad enough to include Y-STR profiles but would exclude the storage of mixed crime scene profiles.[38] A different definition could easily be adopted in New Zealand if a policy decision was made to continue to upload mixed profiles to the CSD.

10.67 We consider that, at the very least, new legislation in New Zealand should recognise and define the Crime Sample Databank and the elimination databanks. Beyond that, the tension between certainty and flexibility becomes more difficult to reconcile. If the rules around the CSD are too prescriptive, the legislation will quickly become outdated. DNA profiling technology may be moving too fast for rigid rules. However, as we discuss below, further legislative guidance or at least a statutory requirement for publicly accessible policies may be required in relation to the criteria for uploading, matching and retaining crime scene profiles as well as in respect of reporting requirements and other accountability measures.

Q21 Do you think that the Crime Sample Databank (CSD) should be expressly referred to in legislation? If so, what level of detail do you think would be appropriate?

36 See Table 1 in Chapter 4.

37 Criminal Justice (Forensic Evidence and DNA Database System) Act 2014 (Ireland), s 61(1)(a).

38 Criminal Justice (Forensic Evidence and DNA Database System) Act 2014 (Ireland), s 2 states:

> "DNA profile" in relation to a person, means information comprising a set of identification characteristics of the non-coding part of DNA derived from an examination and analysis of a sample of biological material that is clearly identifiable as relating to the person and that is capable of comparison with similar information derived from an examination and analysis of another sample of biological material for the purpose of determining whether or not that other sample could relate to that person.

UPLOADING CRIME SCENE PROFILES

10.68 As indicated above, we consider that there is insufficient transparency around the nature of the crime scene profiles that are being, or may be, uploaded to the CSD. In addition, we have the following concerns about the current practices around uploading crime scene profiles to the CSD:

(a) **Crime scene profiles are being uploaded to the CSD when there is no case-specific need to do so**. This is evidenced by *Police v SJ*, as well as some of the cases identified in the Auckland City District Study. In these cases, the suspect had already been identified (and in some cases had already pleaded guilty to the offending) when their profile was uploaded to the CSD.[39]

Uploading profiles to the CSD without a case-specific reason to do so is problematic for four reasons:

(i) It arguably breaches the privacy principles because – while the profile was collected to identify the offender – it is not being used for that purpose.

(ii) The crime scene profile is generally retained indefinitely and can be inappropriately matched to another profile on the CSD – as occurred in *Police v SJ*.

(iii) It increases the link rate (which, as we discuss below, is used to measure the success of the CSD) even though the offender's identity was already known to Police and the link was of little or no value to the investigation.

(iv) It may create unnecessary work for ESR and expense for Police.

(b) **DNA profiles of victims and third parties may be inadvertently uploaded to the CSD.** The risk of this occurring is also likely to increase. That is because DNA profiling kits are becoming more sensitive.

As discussed in Chapter 7, the advent of trace DNA analysis means that crime scene profiles can now be generated from items that people have merely touched at crime scenes. In turn, it seems likely that many of these profiles will belong to innocent third parties. Further, as explained, unresolved mixed crime scene samples are now being added to the CSD. The likelihood of these profiles containing DNA from victims and/or third parties is particularly high.

The difficulty with uploading these profiles to the CSD is that victim and third-party profiles may be matched to other profiles on the CSD. This may implicate the victim or third party as a suspect in relation to other offending. In relation to victims, this issue was the focus of an inquiry conducted by the New South Wales Legislative Council in 2009.[40]

The Council identified two conflicting imperatives: the desirability of encouraging victims to report offending and cooperate with police investigations by providing elimination samples on one hand and the desirability of supporting Police to apprehend offenders on the other. To recognise both imperatives, the Council considered that there should be legislative protections in place to ensure that all

[39] See [10.37] and discussion at [10.40]. This may be a particular problem in non-suspect volume crime cases, as there is no need for investigators to decide explicitly whether to use the CSD or not.

[40] New South Wales Legislative Council Standing Committee on Law and Justice *Use of Victim's DNA* (Report 41, December 2009).

reasonable steps are taken not to upload victim profiles to the CSD and to ensure that any such victim profiles are removed from the CSD as soon as they are identified.[41] It also recommended that there should be a statutory ban on prosecuting victims for unrelated offending based on an internal match within the CSD, except in cases of serious offending.

(c) **There are no transparent safeguards in place around low-quality crime scene profiles**. As noted above, on rare occasions, ESR has conducted a one-off match between a low-quality crime scene profile, the CSD and the known person databank.

This may not be consistent with information privacy principle 8, which requires agencies to ensure that personal information is sufficiently complete that it may be used for its lawful purpose without being misleading. Depending on exactly how incomplete a crime scene profile was, this matching process could generate large numbers of misleading investigative leads. We are also unsure as to whether this could amount to a form of familial searching.

Familial searching is the subject of Chapter 13. Here we simply note that if, for example, a crime scene sample only had three STRs and those STRs were also in a profile on the known person databank, potentially this could suggest that the known person or one of their close relatives was responsible for the crime scene profile.

(d) **Crime scene profiles are being uploaded to the CSD in relation to relatively minor volume crimes (such as theft of an item valued at under $500 from a vehicle), and resultant link reports are not being followed up by Police**. This was identified as a problem in the Auckland City District Study for numerous reasons, including poor administrative processes. We note that this issue may now have been addressed by changes to Police's file management system.

We remain concerned that it may not be appropriate to use the CSD to resolve investigations into minor volume crimes, such as unlawful interference with a motor vehicle. There are three main reasons:

(i) In terms of proportionality, we are not convinced that the level of criminality warrants the intrusion on privacy.

(ii) From a purely practical level, we question whether the crime scene profiles have much evidential value in these cases. Innocent explanations for touching the outside of a car would be hard to disprove, so unless the profile came from inside the car, it could only play a small part in the Crown case.

(iii) If Police does not have the resources to follow up on link reports, it is hard to justify the cost of the forensic analysis in the first place.

(e) **The rules around unidentified human remains could be clearer**. It is sometimes necessary for a police officer to identify a dead body. If it appears that the person's death may be associated with criminal offending, the officer will be able to obtain a biological sample from the body to send to ESR for analysis. Any resultant profile could be compared to the profiles on the CSD and the known person databank.

There is nothing in the current law to stop Police from using the CSD to identify victims, as opposed to potential offenders, when it appears that a person's death

[41] In New South Wales, a formal Victims Protocol, signed by the Minister of Health and the Attorney General in 2007, already contained this policy, but the Legislative Council considered that the Protocol should have legislative standing: at 55.

may be associated with criminal offending. However, if there is no indication that the death was associated with criminal offending, the databanks could not be used in this way. We understand that this can be problematic in cases where police officers are trying to identify victims of disasters and individuals who have died of natural causes.

The United Kingdom, the United States, Canada, Australia and Ireland all use their DNA profile databank systems to assist in resolving missing person cases and in disaster victim identification as well as criminal cases. Most of these countries maintain a DNA database system that has separate indices for unidentified human remains and for the relatives of missing persons. There are then strict rules around permissible matching between the indices.

This issue is outside our terms of reference.[42] However, we note that there could be merit in extending New Zealand's DNA databank system to enable its use in missing person cases and disaster victim identification. This would alleviate any confusion as to the appropriate course of action for Police to take upon discovery of an unidentified human body where a DNA profile might assist in identification.

REMOVING CRIME SCENE PROFILES

10.69 Compounding our concerns about crime scene profiles being inappropriately uploaded to the CSD is the current policy of retaining profiles indefinitely. The only profiles that are removed relate to individuals who police officers later discover had "legitimate access to the crime scene". *Police v SJ* suggests that this information is not always communicated to ESR.[43] We explore this issue in depth in Chapter 14, which looks at the retention periods for biological samples and DNA profiles more generally.

Options for reform

10.70 As noted, it could be counter-productive to enact highly prescriptive statutory rules around when a profile may be uploaded to the CSD. Some flexibility is required to accommodate scientific developments. To promote flexibility, it may be better to address the issues that we have identified by introducing an active role for an oversight body and/or by placing statutory obligations on Police and ESR. Those obligations could include requirements to maintain publicly available policy statements and/or to report on certain matters, such as NZBORA and Treaty of Waitangi consistency, and consideration of privacy and tikanga issues. We discuss oversight at Chapter 15.

10.71 One option would be to give an oversight body overall responsibility for monitoring use of the CSD. This could include approving policy statements developed by Police and ESR around standard use. These statements could explain the rules around matters such as:

(a) the use of the CSD in cases involving minor volume crime cases;

(b) the use of the CSD when the identity of the offender is known at the outset;

(c) the quality threshold for uploading a profile to the CSD; and

(d) the nature of profiles uploaded to the CSD (for example, whether traditional STR profiling, Y-STR profiling and/or STRmix will be used to generate profiles).

42 A copy of the terms of reference can be found in Appendix 1.

43 *Police v SJ* [2017] NZDC 17314, [2018] DCR 587.

10.72 The oversight body could then monitor compliance with those statements and potentially approve any one-off non-standard use of the CSD that falls outside the scope of the policy statements.

10.73 A similar approach could be taken in respect of victim and third-party profiles. ESR and Police could publish policy statements explaining the steps that each intends to take to ensure that these profiles are not uploaded to the CSD. The oversight body could then have a monitoring and compliance role. This could include audits.

10.74 However, when it comes to victim and third-party profiles, there is a particular need for certainty and transparency. It can be argued that victims and third parties need to know that any biological sample they provide to Police (either as a crime scene sample or an elimination sample) will not be used to implicate them in unrelated offending. If there are insufficient protections in place, there is a risk that these individuals will not want to provide elimination samples. For this reason, Canada has, in 2018, introduced an index into its DNA profile database that is reserved purely for victim profiles. The Canadian legislation states that a match between a profile in the victim index and any other profile on the database may only be reported to investigators if it relates to the offence for which the profile was originally obtained.[44] Similarly, a number of Australian jurisdictions have a volunteer (limited purpose) index, which contains victim and third-party profiles that have been generated from elimination samples provided in specific investigations. Again, legislation provides strict matching rules.[45]

10.75 It may be appropriate for legislation in New Zealand to similarly protect against inappropriate use of victim (and potentially third-party) profiles. Legislation could obligate Police to take all reasonable steps to ensure that such profiles are not uploaded to the CSD. Alternatively, it could place limits around permissible matching, as occurs overseas. A third option would be to enact a statutory ban on using an internal match within the CSD to prosecute a victim or third party for unrelated offending, unless it is particularly serious. This is what was recommended by the NSW Legislative Council in 2009. We note that this has not yet been acted upon in that jurisdiction and, in addition, could still potentially impact on the willingness of victims and third parties to provide samples.

10.76 The other area where the transparency of legislation (as opposed to a policy statement) may be required is the use of the CSD in cases that involve relatively minor offending. As explained in Chapter 2, it is important that the purpose of the DNA databank regime is made clear in legislation. That purpose is reflected, in part, by the choices that are made around uploading profiles to the CSD. The investigations where a profile is uploaded to the CSD are the ones that have the potential to be resolved using the databank regime. It is also important that the need for proportionality is transparently recognised. The privacy intrusion inherent in using the databank regime must be proportionate to the societal interest in resolving the investigations.

10.77 To reflect these considerations, any new legislation could set a threshold for the level of seriousness of the offence before a crime scene profile can be uploaded to the CSD. For example, if the threshold was a maximum penalty of 10 years' imprisonment, burglary would be included but other volume crimes would not. Alternatively, if the threshold was

44 DNA Identification Act SC 1998 c 37, s 6(1)(a).

45 See Table 1 in Chapter 4.

a maximum penalty of seven years' imprisonment, theft of items valued at more than $1,000 would be included but theft of less valuable items would not.[46]

Q22 Do you have any particular concerns about victim and third-party profiles being uploaded to the CSD? If so, how do you think those concerns would best be addressed?

Q23 Do you have any concerns about low-quality crime scene profiles being uploaded onto the CSD? If so, how do you think those concerns would best be addressed?

Q24 What type of offending do you think we should aim to resolve using the CSD? Put another way, do you think that DNA profiles associated with any level of offending should be able to be uploaded onto the CSD, or should there be a seriousness threshold? If so, what level of seriousness do you think would be appropriate?

MEASURING EFFECTIVENESS

10.78 In order to measure the effectiveness of New Zealand's DNA databank regime, ESR monitors the "link rate" within the CSD and between the CSD and the known person databank. The link rate is the percentage of profiles that have matched another profile on one of the databanks. The match may occur when the profile is first uploaded to the CSD or at a later date when new profiles are added to the CSD or the known person databank. The link rates are aggregates, so they tend to improve over time.

10.79 At present, the crime to crime link rate is 32 per cent. This means that 32 per cent of the profiles that have been uploaded to the CSD have matched another profile on the CSD. The crime to person link rate is 70 per cent. This means that 70 per cent of the profiles that have been uploaded to the CSD have matched a profile on the known person databank. These figures are often cited to support two propositions: one, New Zealand has the most effective DNA databank regime in the world; and two, the "right people" are on the known person databank.

10.80 However, as noted by an Australian Law Reform commentator:[47]

> Statistics on the number of "matches" between DNA profiles and crime scene stains are, however, misleading in some crucial respects. Firstly, "matches" do not signify guilt, nor do they represent arrests made or convictions secured. A match simply means that a particular person may have been – but was not necessarily – present at a particular crime scene at some particular point in time.

10.81 As explained above, the link rates are aggregates. We know that some of the matches that contributed to New Zealand's high link rate related to victims, third parties and offenders who had already been identified by Police. Those matches were of little or no value in resolving the associated investigations. On the other hand, we are aware of other cases, which will also have had an impact on the link rate, where the match marked a crucial turning point in the investigation and resulted in a conviction for serious

46 Crimes Act 1961, ss 223 and 231.

47 Ben Saul "Genetic Policing: Forensic DNA in New South Wales" (2001) 13 Current Issues in Criminal Justice 74 at 93.

offending.[48] What is missing from the data is a systemic sense of exactly how effective link reports are in assisting in the resolution of criminal investigations.

10.82 The reporting obligations in section 76 of the CIBS Act require Police to report on the number of link reports each year. Police is not required to monitor use of those reports. However, section 76 does require Police to report on how often reference samples obtained under Part 2 of the CIBS Act are offered in evidence at trial and how many of those trials resulted in a conviction.[49] Theoretically, this could give a sense of the effectiveness of the databank system, as often the reference samples obtained under Part 2 are obtained as a result of a link report.[50] Police reported these figures between 2004 and 2007.[51] In all other years, Police stated that the data was not available.

10.83 There are a number of difficulties inherent in trying to measure effectiveness of DNA databanks on conviction numbers alone. For example:

(a) there are considerable practical difficulties in monitoring the evidence presented in trials and the impact of that evidence on jurors;

(b) a focus on trials discounts the cases where a link report may have caused the offender to plead guilty;

(c) a conviction in respect of a prolific burglar may have a greater societal impact than a conviction for a one-off assault; and

(d) any focus on convictions does not take into account those cases where a suspect is eliminated from an investigation because of a link report.

10.84 Despite these difficulties, international commentators have identified an "urgent need" for more empirical evidence to be collected to measure the effectiveness of DNA profile databanks.[52] They argue that the policing and forensic science community is "flying blind in terms of the true impact of its work" and that the continuing expansion of the databanks cannot be justified without more concrete evidence as to their utility.[53] As a result, numerous academic studies have been initiated in the United Kingdom and

48 For example, in three of the 12 illustrative case studies in the Auckland City District Study, the link report appears to have been central in identifying the offender. One case study provides a particularly clear demonstration of how useful the CSD can be. In this case, a complainant was raped by a stranger in Auckland City and received life-threatening head injuries during the assault. The complainant's medical examination kit was sent to ESR for analysis. The resultant crime scene profile was uploaded to the CSD and linked to a potential offender who had been released from prison on the day of the rape. He denied having been in Auckland. This was inconsistent with the DNA evidence and witness accounts. The offender was convicted of rape and wounding with intent to cause grievous bodily harm.

49 Criminal Investigations (Bodily Samples) Act 1995, s 76(1)(d).

50 A link report cannot be offered in evidence at a trial; a reference sample must be obtained under Part 2 to confirm the match instead: Criminal Investigations (Bodily Samples) Act 1995, s 71. See also discussion in Chapter 8 of the relationship between Parts 2 and 2B of the Criminal Investigations (Bodily Samples) Act 1995.

51 In those years, the evidence was offered in trials on seven, seven and 23 occasions. Those trials resulted in convictions seven, seven and 14 times, respectively.

52 Roberta Julian and others "What is the value of forensic science? An overview of the effectiveness of forensic science in the Australian criminal justice system project" (2011) 43 Australian Journal of Forensic Sciences 217 at 218. Sally Kelty, Roberta Julian and Robert Hayes "The Impact of Forensic Evidence on Criminal Justice: Evidence from Case Processing Studies" in Kevin J Strom and Matthew J Hickman (eds) *Forensic Science and the Administration of Justice: Critical Issues and Directions* (SAGE Publications, California, 2015) 101; and Marcus Smith and Monique Mann *Recent Developments in DNA Evidence* (Australian Institute of Criminology, 2015).

53 Roberta Julian and others "What is the value of forensic science? An overview of the effectiveness of forensic science in the Australian criminal justice system project" (2011) 43 Australian Journal of Forensic Sciences 217 at 220.

Australia with a goal of figuring out how best to measure effectiveness.[54] In New Zealand, the new Evidence Based Policing Centre may be well placed to contribute to this research and to build on the insights already gained from the Auckland City District Study.[55]

10.85 What is important, in our view, is increased transparency and accountability rather than the exact form in which this information is presented. We are conscious that it may not be possible to draft a statutory reporting requirement that both provides a meaningful measure of the utility of link reports and avoids Police incurring significant administrative costs in compliance. Because of this, we consider that it may be appropriate for an oversight body with the capacity to consider Treaty of Waitangi, NZBORA, privacy and tikanga issues to be responsible for working with Police to identify how best to monitor use of link reports and the overall effectiveness of the CSD. An oversight body and/or Police could then report on these matters annually. The broad requirement for such annual reporting could be established in legislation, leaving the details of how best to monitor and report on effectiveness able to be adjusted to reflect changes in institutional practice and lessons emerging from New Zealand and international research.

Q25 Do you think that additional steps should be taken to measure how effective New Zealand's DNA profile databanks are in helping to resolve criminal investigations? If so, what do you think those steps should be?

54 See the summary in the Auckland City District Study at 68–74. See also Aaron Amankwaa and Carole McCartney "The UK National DNA Database: Implementation of the Protection of Freedoms Act 2012" (2018) 284 Forensic Science International 117 at [3.2.3] and [4].

55 The Evidence Based Policing Centre was established last year and is a joint partnership between Police, ESR and the University of Waikato. Staff from these organisations will use the Centre to collaborate on research projects, designed to improve Police's frontline capabilities. See New Zealand Police "Strong partnerships at core of new Evidence Based Policing Centre" (press release, 14 December 2017).

CHAPTER 11

Known person databank – collection

INTRODUCTION

11.1 This chapter is about collecting biological samples and uploading the resulting DNA profiles to the known person databank. We deal with the issues around how long profiles are retained on the known person databank in Chapter 14.

11.2 There are four ways in which a person's profile may end up on the known person databank. There is considerable overlap between these different collection methods and little guidance in the Criminal Investigations (Bodily Samples) Act 1995 (CIBS Act). To fill that gap, New Zealand Police has developed guidance in its Police Manual. This chapter describes the legislative framework, provides an overview of the guidance in the Police Manual and then examines the available data to highlight some broad trends.

11.3 Having reviewed the law and current practice, we discuss issues in relation to who currently qualifies for databank sampling, how police officers decide to obtain such samples and whether it is appropriate to obtain databank samples at the time of arrest/intention to charge. We also discuss two discrete issues concerning the physical collection process.

11.4 Finally, we consider the options for reform. This includes a discussion of a universal databank.

TERMINOLOGY

11.5 At the outset, it is worth reiterating how we use certain phrases in this issues paper. The CIBS Act establishes two databanks: the Temporary Databank (under Part 2B) and the DNA Profile Databank (DPD) (under Part 3). However, when it comes to comparing these databanks to the Crime Sample Databank (CSD),[1] they are treated in exactly the same way. For that reason, we refer to the Temporary Databank and the DPD collectively as the known person databank. We use DPD and Temporary Databank when we are referring to provisions in the CIBS Act.

[1] As we discuss in Chapter 10 and elsewhere in this issues paper, the Crime Sample Databank is a databank containing crime scene profiles that is maintained by ESR on behalf of Police. It is not regulated as it was not established by the Criminal Investigations (Bodily Samples) Act 1995.

THE CIBS ACT

11.6 The CIBS Act is a code when it comes to obtaining DNA profiles for the known person databank.[2] It provides four different ways in which a person's DNA profile may end up there:

(a) Suspect profile transfer (sample originally obtained under Part 2).

(b) A sample required at the time of arrest/intention to charge under Part 2B.

(c) A sample required by databank compulsion notice under Part 3.

(d) A databank consent sample under Part 3.

11.7 We briefly discuss each of these means of populating the databank.

Suspect profile transfer

11.8 An adult, young person or prosecutable child[3] may provide a suspect sample in relation to a specific case. This is governed by Part 2 of the CIBS Act. The sample may be obtained by consent or under a suspect or juvenile compulsion order. If that person is later convicted of the triggering offence (that is, the offence for which they gave the suspect sample) or a related offence, their DNA profile is transferred to the DPD.[4]

Required at the time of arrest/intention to charge

11.9 Under Part 2B of the CIBS Act, a police officer may require an adult or young person to provide a biological sample for the purpose of generating a DNA profile to add to the Temporary Databank. Certain criteria must be first met. For adults, the criteria are:

(a) the person must be detained in Police custody for committing an offence; or

(b) the officer must have good cause to suspect the person of committing the offence and must intend to charge them with it; and

(c) the offence must be imprisonable or the offence of peeping and peering.[5]

11.10 The term "imprisonable" can be misunderstood to mean any offence where a person is ultimately sentenced to a term of imprisonment. This is not the case. The threshold is much lower. It is any offence where a term of imprisonment could theoretically be imposed. For example, the offence of littering is imprisonable, but only the worst possible repeat littering offender would be at risk of any prison sentence being imposed.

11.11 The criteria for obtaining samples from young persons are slightly different. A young person must have been arrested or a policer office must intend to charge the young person with a "relevant offence" (as opposed to an imprisonable offence or the offence

2 The case of *R v T* [1992] 2 NZLR 602 (CA) held that the Act is a code. *R v Shaheed* [2002] 2 NZLR 377 (CA) and the more recent case of *R v Toki* [2017] NZCA 513, [2018] 2 NZLR 362 confirmed that position in the context of seeking databank requests.

3 The prosecutable offences are murder or manslaughter, if the child is 10 years old or older; offences punishable by 14 years' imprisonment or more, if the child is 12 years old or older; or offences punishable by 10 years' imprisonment or more, if the child is 12 years old or older and a previous offender. For definitions of "adult", "young persons" and "child", see Glossary at the front of this paper.

4 Section 26(a) of the Criminal Investigations (Bodily Samples) Act 1995 states that such a profile may be transferred to the DPD unless the conviction is subsequently quashed. If the conviction is for a "related offence" (as opposed to the triggering offence), that offence must also be an imprisonable offence or the offence of peeping and peering. In practice, if a person's profile is already held on the databank, then another profile will not be transferred.

5 Criminal Investigations (Bodily Samples) Act 1995, s 24J.

of peeping and peering). A "relevant offence", in summary, includes serious sexual or violent offences, offences punishable by seven years' imprisonment or more (or attempts and conspiracies to commit these offences) or one of the 23 less serious offences specified in the Schedule to the CIBS Act.[6]

11.12 Before any sample is taken pursuant to Part 2B, the adult or young person must be handed a written notice in a prescribed form and provided with oral advice on certain matters.[7] These matters are similar to those that must be brought to the attention of a suspect when seeking consent to take a sample under Part 2 but are more limited in their scope, given consent is not required.[8]

11.13 Part 2B is structured very differently to Parts 2 and 3 of the CIBS Act. Unlike Parts 2 and 3, there is no reference to consent and no oversight role for the courts. An officer may simply "require" the person to provide the sample (and is entitled to use reasonable force to obtain it if necessary).[9] Also, an adult is not entitled to have a support person or a lawyer present.[10]

11.14 After two months, any DNA profile obtained under Part 2B must be destroyed unless the person is charged with the triggering offence or a related offence.[11] If the person is charged with such an offence, their DNA profile is uploaded onto the Temporary Databank until the court proceedings have concluded.[12] If the person is acquitted or the charge is withdrawn, their profile is removed from the Temporary Databank.[13] If the person is convicted, their profile is transferred to the DPD.[14]

11.15 However, there is no difference between the Temporary Databank and the DPD when it comes to forensic comparisons. Both are compared to the CSD the same way. Therefore, in effect, any person whose DNA profile is obtained under Part 2B is on the known person databank as soon as they have been charged with the triggering offence or a related offence. Their profile will be removed if they are acquitted, but it may be on the Temporary Databank for a year or more before that occurs.

6 Criminal Investigations (Bodily Samples) Act 1995, ss 2 (definition of "relevant offence") and 24K. The definition of "relevant offence" under Criminal Investigations (Bodily Samples) Act 1995, s 2 now incorporates all the offences listed in the three Parts that comprise the Schedule to the Act – which, in summary, include serious sexual and violent offences; offences punishable by seven years' imprisonment or more (as well as attempts and conspiracies); and selected offences under the Animal Welfare Act 1999, the Arms Act 1983, the Crimes Act 1961, the Land Transport Act 1998 and the Summary Offences Act 1981 (peeping and peering). Of the relevant offences, 23 have a maximum penalty of less than seven years imprisonment. Twenty of these are listed in Part 3 of the Schedule added in 2009. See discussion in Chapter 4 as to how the definition of "relevant offence" has changed since 1995.

7 Criminal Investigations (Bodily Samples) Act 1995, ss 24M and 24N. The matters set out include particularising the triggering offence; providing information regarding the storage of the biological sample and DNA profile and when they may be destroyed or the profile transferred to the DPD; a summary of the procedures for taking the sample, including that the sample may be taken by reasonable force; information concerning analysis of the sample and access and disclosure of information retained on the Temporary Databank and DPD; and a statement that a DNA profile derived from the sample cannot be used against the person as evidence in criminal proceedings.

8 Discussed in Chapter 8.

9 Criminal Investigations (Bodily Samples) Act 1995, s 54A.

10 Criminal Investigations (Bodily Samples) Act 1995, ss 50–50D.

11 Criminal Investigations (Bodily Samples) Act 1995, s 60A(3)(a). However, it should be noted that it is Police practice not to send a sample to ESR for analysis until any charges are filed and therefore there would be no profile generated and none to destroy. Section 60A(2) provides that a sample must be destroyed "as soon as practicable after a DNA profile is obtained from the sample". See Chapter 14 for further discussion.

12 Criminal Investigations (Bodily Samples) Act 1995, s 24P.

13 Criminal Investigations (Bodily Samples) Act 1995, s 60A(3)(b).

14 Criminal Investigations (Bodily Samples) Act 1995, s 26 (ab) and (ac).

Databank compulsion notice

11.16 Under Part 3 of the CIBS Act, a police officer of the rank of Inspector or above may issue a databank compulsion notice if an adult, young person or child has been convicted of an imprisonable offence or the offence of peeping and peering.[15] Since a child can only be convicted of a limited number of very serious offences,[16] only a small number would ever qualify.

11.17 From 2015 onwards, police officers can issue databank compulsion notices in relation to equivalent serious overseas offending. This power may be used if an offender is deported or removed to New Zealand due to their being convicted in an overseas jurisdiction of an offence "for conduct that constitutes an imprisonable offence in New Zealand" and in respect of which Part 3 of the CIBS Act applies.[17]

11.18 A databank compulsion notice requires the person to provide a biological sample for the DPD at a specified date and place.[18] The date must be:[19]

(a) within six months of the conviction being entered if the person is not sentenced to a term of imprisonment or is sentenced to imprisonment but the term is six months or less; or

(b) before the person's release date if the person is sentenced to a term of imprisonment that is longer than six months.

11.19 The databank compulsion notice must be in a prescribed form, which differs for those aged 17 years or over and for young persons and children.[20] It must be formally served on the relevant person as soon as is reasonably practicable after the conviction is entered and, where the person is under 17 years of age, served on a parent as well.[21]

15 Criminal Investigations (Bodily Samples) Act 1995, s 39. The Police Manual also notes, however, that a databank compulsion notice cannot be obtained from a young person who receives "a s 282 order only". Police Manual *DNA Sampling* at 30. We understand this to mean that Police will not apply for a databank compulsion notice where the Youth Court discharges the charge (or charges) under section 282 of the Oranga Tamariki Act 1989 or where the Youth Court makes a finding that a charge against a young person is proven but then discharges the charge under section 282 of the Oranga Tamariki Act 1989 and makes no further orders. This guidance in the Police Manual appears to have been inserted after a 2006 case, *Police* v *JL* [2006] 404 (YC), where the Court held that a databank compulsion notice was of no effect where a charge had been proved but then discharged.

16 Criminal Investigations (Bodily Samples) Act 1995, s 23(1)(b). Child means a person aged 10 years or over but under the age of 14 years. Criminal Investigations (Bodily Samples) Act 1995, s 2. Samples can be obtained from children pursuant to a juvenile compulsion order under Part 2 in respect of offences for which they can be prosecuted. Under Part 3, databank compulsion notices can only be sought upon conviction – which, for children, would be a conviction for a prosecutable offence. The prosecutable offences are murder or manslaughter, if the child is 10 years old or older; offences with a maximum penalty of life imprisonment or at least 14 years' imprisonment, if the child is 12 or 13 years old; or offences with a maximum penalty of between 10 to 13 years' imprisonment inclusive, if the child is 12 or 13 years old and a previous offender. "Previous offender" means that the child has previously committed murder or manslaughter, an offence with a maximum penalty of life imprisonment or at least 14 years' imprisonment, or an offence punishable by a maximum penalty of between 10 and 13 years' imprisonment (inclusive) (see Oranga Tamariki Act 1989, s 272(1A) and (1B)).

17 Returning Offenders (Management and Information) Act 2015, s 14. Section 15 provides various modifications to Part 3 of the Criminal Investigations (Bodily Samples) Act 1995, including the timing of issuing the notice and that the appropriate court to deal with any hearing requested, or other matters, is the District Court.

18 Criminal Investigations (Bodily Samples) Act 1995, s 39A(2)(b).

19 Criminal Investigations (Bodily Samples) Act 1995, ss 39C(3) and (4).

20 Criminal Investigations (Bodily Samples) Act 1995, ss 39A and 39B.

21 Criminal Investigations (Bodily Samples) Act 1995, ss 39(3)–(4) deal with notification. A slightly different notification rule applies if the person is serving a prison sentence. Also, as identified in *Taylor v A-G* HC Wellington CIV-2005-485-530 4 May 2005 at [18], the Act does not provide a remedy for failure to issue and serve a databank compulsion notice "as soon as is reasonably practicable after the person's conviction". Section 39(2)(b) of the Criminal Investigations (Bodily

11.20 If the person wishes to challenge a databank compulsion notice, they can request a police officer to arrange a hearing before the court that sentenced the person for the offence.[22] A hearing can be requested on one of the following grounds:[23]

(a) The Act does not apply to the particular offence or conviction in question.

(b) The conviction has been quashed.

(c) All three methods for taking a biological sample (buccal (mouth) swab, fingerprick and venous) would cause serious harm to the person's health.

(d) The notice does not comply with the statutory timeframes.

(e) The person was not served with the notice or, if the person is under 17 years, reasonable attempts were not made to serve the parent or caregiver of the young person.

11.21 At the hearing, the judge may vary or impose conditions on the original notice or may hold that it is of no effect.[24]

Databank consent sample for DPD

11.22 Part 3 of the CIBS Act also provides that a police officer may ask anyone aged 17 years or over to provide a biological sample by consent (databank consent sample) for the purpose of uploading the profile generated from that sample to the DPD.[25]

11.23 Before a databank consent sample is obtained, the officer must provide the person with a written notice in the prescribed form and oral advice on certain matters.[26] Again, these matters are very similar to those that must be brought to the attention of a suspect when seeking to obtain a sample under Part 2 by consent.[27]

11.24 If the person consents, that consent must be recorded in writing or on video.[28]

11.25 After consent, the person's sample is analysed and the profile retained on the DPD. They can withdraw their consent at any time and their profile will be removed from the DPD, except in certain circumstances (for example, if between consenting and withdrawing consent they have been convicted of an imprisonable offence or the offence of peeping and peering).[29]

Samples) Act 1995 provides that "all reasonable steps" must be taken "to serve a copy of the notice on a parent or other person having the care of that person". "Parent" is defined in section 2 to include a guardian, a step-parent sharing day-to-day care with a parent or, if no parent or guardian can be found, a person acting in the place of a parent.

22 Criminal Investigations (Bodily Samples) Act 1995, s 41(4) specifies that the "appropriate court" to deal with a hearing of a databank compulsion notice is:

> the court before which the person to whom the databank compulsion notice relates was sentenced for the offence, or is due to appear for sentence for the offence, in relation to which the notice has been issued.

23 Criminal Investigations (Bodily Samples) Act 1995, s 41(2).

24 Criminal Investigations (Bodily Samples) Act 1995, s 43.

25 Criminal Investigations (Bodily Samples) Act 1995, s 30. This means children and young persons cannot be asked to provide a databank consent sample.

26 Criminal Investigations (Bodily Samples) Act 1995, ss 30(2) and 31.

27 Criminal Investigations (Bodily Samples) Act 1995, s 31. Further discussion on this can be found in Chapter 8.

28 Criminal Investigations (Bodily Samples) Act 1995, s 34.

29 Criminal Investigations (Bodily Samples) Act 1995, ss 36 and 37. The other main reason that a profile will not be removed from the DPD is if Police is contemplating or is in the process of seeking a sample from the person under the suspect regime (by consent or compulsion order). Sections 36–38 contain complex rules governing these situations.

Dual requests

11.26 If the person is a suspect and Part 2 of the CIBS Act is engaged, a police officer can make a dual request.[30] The officer may ask the person to provide a sample by consent for use both:

(a) as a suspect sample in relation to the offence under investigation; and

(b) as a databank consent sample to generate a DNA profile for storage on the DPD.

11.27 If a dual request is made, the officer must inform the person that they can opt to consent to only one part of the request. The CIBS Act also prescribes slightly different notice and advice procedures for a dual request.

POLICE MANUAL

11.28 Of the four ways profiles can be added to the known person databank (described above), only a suspect profile is added automatically.[31] In practice, Police and the Institute of Environmental Science and Research (ESR) have an arrangement whereby all suspect profiles are transferred to the DPD upon Police notifying ESR of the conviction if the person's profile is not already on the databank.[32]

11.29 In relation to the other three ways, a police officer must exercise discretion in deciding whether to obtain a sample.[33] As we discuss later in the chapter, the use of discretion in policing can be problematic, even when there is sufficient guidance. However, there is virtually no guidance in the CIBS Act on the factors that an officer should take into account in deciding whether to:

(a) require a person to provide a sample for the Temporary Databank (if the statutory criteria are met);

(b) issue a databank compulsion notice (if the statutory criteria are met); or

(c) ask a person to provide a sample for the DPD by consent.

We now provide an overview of the guidance set out in the Police Manual to assist police officers in making these decisions.

Guidance on Part 2B – the Temporary Databank regime

11.30 The Police Manual confirms that police officers are not required to obtain samples under Part 2B from every adult and young person who meets the statutory criteria. Instead, police officers must use their discretion. It "must be exercised appropriately with consideration given to each case on an individual basis which must be justifiable".[34]

Depending on the outcome of the request or court application, Police may be able to use the databank request profile as if it were obtained as a suspect sample.

30 Criminal Investigations (Bodily Samples) Act 1995, s 33.

31 Section 26(a) of the Criminal Investigations (Bodily Samples) Act 1995 authorises storage of these profiles on a databank if the suspect is convicted of the triggering offence or a related offence.

32 Police Manual *DNA Sampling* at 52.

33 If obtained, the analysed profile will usually be added to the databank.

34 Police Manual *DNA Sampling* at 16.

11.31 Before setting out the relevant factors in making such a decision, the Police Manual notes that there are legal risks to Police if Part 2B is not used appropriately. It states:[35]

IF …	THEN …
Police discretion is not appropriately used	the Courts may decide that the suspect was subjected to an unreasonable search and seizure
The power of detention is abused or is used in a way that breaches the New Zealand Bill of Rights Act 1990	claims of unlawful detention against Police may result
Police operate outside of what is legislatively acceptable	it may result in costs being awarded against the Police and/or the dismissal of serious charges

11.32 Having explained the risks, the Police Manual advises that police officers should consider the following factors (or questions) when deciding whether to take a sample under Part 2B for the Temporary Databank:[36]

(a) The statutory criteria are met.

(b) There is no reason not to take the sample (that is, the person's profile is not already on the known person databank, there is no risk to anyone's health or safety and an appropriate sampling kit is available).

(c) There are particular circumstances relating to the offence or the suspect that give the officer reasonable grounds to suspect that the person has committed other offending of the type where DNA evidence would be relevant.

11.33 In relation to the last factor, the Police Manual indicates that the officer should require the person to provide a sample if:

(a) the triggering offence is a serious violent offence, a sexual crime, a firearms offence, burglary or a Class A drugs offence; or

(b) the triggering offence is a "relevant offence" under the CIBS Act[37] and the person has one or more of the following characteristics: the person is under the age of 20; has six or more previous convictions; has been apprehended for threatening to kill or do grievous bodily harm, receiving or theft, fraud or peeping and peering; or has a medium-high frequency of previous prosecutions;[38] or

(c) the offence is imprisonable but is not a relevant offence[39] and the person has two or more of the following characteristics: two or more previous convictions or is on active charges for theft from a car/person/dwelling place; possessing a knife in a

35 Police Manual *DNA Sampling* at 16.

36 Police Manual *DNA Sampling* at 16–18.

37 Criminal Investigations (Bodily Samples) Act 1995, ss 2 (definition of "relevant offence"): The definition of "relevant offence" now incorporates all the offences listed in the three Parts that comprise the Schedule to the Act – which, in summary, include serious sexual and violent offences; offences punishable by seven years' imprisonment or more (as well as attempts and conspiracies); and selected offences under the Animal Welfare Act 1999, the Arms Act 1983, the Crimes Act 1961, the Land Transport Act 1998 and the Summary Offences Act 1981 (peeping and peering).

38 "Medium-high frequency of previous prosecutions" is described as "approximately one prosecution per year if their criminal career is 3 years or more, or more than 2 prosecutions per year if their criminal career [is] 2 years or less." Police Manual *DNA Sampling* at 18.

39 Criminal Investigations (Bodily Samples) Act 1995, ss 2 (definition of "relevant offence").

public place; failure to answer District Court bail; or has a medium-high frequency of previous prosecutions.

11.34 The Police Manual emphasises that, in deciding whether to require a sample under Part 2B of the CIBS Act:[40]

> You must **never** be solely influenced by:
>
> - the person's race, ethnic or national origins;
> - the person's sexual orientation or marital status;
> - the person's ethical, religious or political beliefs;
> - your own personal views (positive or negative) concerning the person;
> - the possible effect that taking a sample may have on the personal or professional reputation of the person or of the officer.

11.35 It further notes that case law states that race will never be a legitimate or relevant basis for taking a sample.[41]

Guidance on Part 3

Obtaining databank consent samples for DPD

11.36 The Police Manual provides the following guidance on who an officer should ask to provide a databank consent sample for the DPD by consent:[42]

> **Who you should consider requesting a voluntary sample from**
>
> Exercise discretion before requesting a voluntary sample to ensure that:
>
> - the right type of active criminal or potential offender is targeted
> - quality intelligence is gathered for the databank, and
> - the sample can subsequently be used to obtain admissible evidence to resolve crime.
>
> The general criteria are that the person does not already have a profile on the databank and:
>
> - is an active criminal or recidivist offender, or is specially targeted
> - has been arrested for or has committed an imprisonable offence or offence against any of the provisions listed in Part 3 of the Schedule
> - has committed an imprisonable offence or offence against any of the provisions listed in Part 3 of the Schedule in the past, not previously provided a sample and shows positive signs of future offending
> - is a suspect for an imprisonable offence or offence against any of the provisions listed in Part 3 of the Schedule and agrees to a dual sample being taken[.] (Note that dual sample donor must be of or over 17 years)
> - Police do not intend to charge the individual with an imprisonable or offence against any of the provisions listed in Part 3 of the Schedule (adult) or a relevant offence[43] (young person).

40 Police Manual *DNA Sampling* at 18.

41 Police Manual *DNA Sampling* at 18. The case cited is *Tairi v NZ Police* HC Hamilton CIV-2006-419-1175, 21 December 2006, which examined the use of Police discretion to apply for a databank compulsion notice.

42 Police Manual *DNA Sampling* at 29. Police uses the term "voluntary sample" as shorthand for samples obtained by consent for the DPD under Part 3. We understand that this is in order to distinguish it from suspect consent samples. However, the Criminal Investigations (Bodily Samples) Act 1995 does not use this term. We refer to these samples as databank consent samples.

11.37 The Police Manual states that, when asking an adult for a suspect sample, a police officer should make a dual request.[44] That means if a police officer is asking any adult to provide a suspect sample by consent, they should also ask that person to consent to the sample being used to generate a DNA profile for the DPD (a databank consent sample). The Police Manual notes that "consent must be given freely and willingly".[45]

Obtaining samples by databank compulsion notice

11.38 By contrast, if the statutory criteria are met to issue a databank compulsion notice, the Police Manual does not contain any guidance as to how an officer should decide whether to issue such a notice in any given case. Instead, the Police Manual recounts the criteria and observes that a "conviction" includes:[46]

(a) a Youth Court finding that a charge against a young person is proved;[47]

(b) an acquittal on account of insanity;

(c) the dismissal of a charge on account of insanity; and

(d) a finding that the person is unfit to stand trial.

ESR VOLUNTARY ETHNICITY FORM

11.39 When a police officer either asks a person to consent to providing a sample for the DPD or requires a person to provide a sample for the Temporary Databank, that person is also given a voluntary ethnicity form to complete.[48] This form is not mentioned in the CIBS Act nor in the Police Manual. Later in the chapter, we discuss the issues with providing this form to those being sampled, but here we set out what is in the form and its purpose.

11.40 The form is clearly labelled "Voluntary DNA Ethnicity Questionnaire" and is prepared by ESR. In essence, Police asks people, on behalf of ESR, if they will complete the form. This form includes the question "What is your ancestral origin ([t]ribal group/language group/island)?"

11.41 By matching the ethnicity information contained in the ESR form to the DNA profile generated from the biological sample, ESR can get a better idea of the frequency of certain genetic markers in the New Zealand population. This is primarily used by ESR to

43 Criminal Investigations (Bodily Samples) Act 1995, ss 2 (definition of "relevant offence"): The definition of "relevant offence" now incorporates all the offences listed in the three Parts that comprise the Schedule to the Act – which, in summary, include serious sexual and violent offences; offences punishable by seven years' imprisonment or more (as well as attempts and conspiracies); and selected offences under the Animal Welfare Act 1999, the Arms Act 1983, the Crimes Act 1961, the Land Transport Act 1998 and the Summary Offences Act 1981 (peeping and peering).

44 Police Manual *DNA Sampling* at 36. The only exception is if a person has previously provided a sample for a databank profile.

45 Police Manual *DNA Sampling* at 36.

46 Police Manual *DNA Sampling* at 30.

47 The Police Manual also notes, however, that a databank compulsion notice cannot be obtained from a young person who receives "a s 282 order only": Police Manual *DNA Sampling* at 30. We understand this to mean that Police will not apply for a databank compulsion notice where the Youth Court discharges the charge (or charges) under section 282 of the Oranga Tamariki Act 1989 or where the Youth Court makes a finding that a charge against a young person is proven but then discharges the charge under section 282 of the Oranga Tamariki Act 1989 and makes no further orders. This guidance in the Police Manual appears to have been inserted after a 2006 case, *Police* v *JL* [2006] 404 (YC), where the Court held that a databank compulsion notice was of no effect where a charge had been proved but then discharged.

48 A copy of the ESR voluntary ethnicity form is in Appendix 2.

calculate more accurately the likelihood ratios that are used to present evidence in court.[49]

11.42 The front page of the ESR voluntary ethnicity form provides the following instructions to police officers:

> Ask the person giving the sample if they would like to complete the questionnaire. The information is used for statistical purposes only. There is no compulsion for the person to supply the information.
>
> The information must be obtained from the person giving the sample.

11.43 The second page of the form asks the person being sampled to select one or more entries from the following chart to describe their own ethnicity, the ethnicity of their parents and the ethnicity of their grandparents:

	FULL	3/4	1/2	1/4	1/8	1/16	1/32
Caucasian	A1	A2	A3	A4	A5	A6	A7
NZ Māori	B1	B2	B3	B4	B5	B6	B7
Samoan	C1	C2	C3	C4	C5	C6	C7
Cook Island Māori	D1	D2	D3	D4	D5	D6	D7
Tongan	E1	E2	E3	E4	E5	E6	E7
Niuean	F1	F2	F3	F4	F5	F6	F7
Tokelauan	G1	G2	G3	G4	G5	G6	G7
Fijian	H1	H2	H3	H4	H5	H6	H7
Vietnamese	J1	J2	J3	J4	J5	J6	J7
Korean	K1	K2	K3	K4	K5	K6	K7
Indian	L1	L2	L3	L4	L5	L6	L7
Pakistani	N1	N2	N3	N4	N5	N6	N7
Chinese	P1	P2	P3	P4	P5	P6	P7
Fijian Indian	Q1	Q2	Q3	Q4	Q5	Q6	Q7
Other (specify)	X1	X2	X3	X4	X5	X6	X7
Don't know	U						

DATA

History of the collection criteria

11.44 The way in which the known person databank is populated has changed markedly since it was established in 1995. The original focus of the CIBS Act was on obtaining DNA profiles for the databank from convicted offenders "who have committed, and may well commit again, the type of sexual or violent offence in respect of which a body sample could be left at the scene".[50] To this end, suspect samples could only be obtained in relation to specified sexual and violent offences. Databank compulsion orders were only available in

[49] For a more detailed discussion of how ESR uses this information, see Chapter 3 and Chapter 6.

[50] (29 November 1994) 545 NZPD 5191. This is discussed in detail in Chapter 4.

relation to the same offences and also for the offences of burglary and entering with intent.[51]

11.45 In 2003, databank compulsion orders (issued by judges) were replaced by contestable databank compulsion notices (issued by police officers). Parliament also expanded the range of offences that could trigger use of the suspect sampling or databank compulsion notice regimes to include additional sexual, violent and property offences.

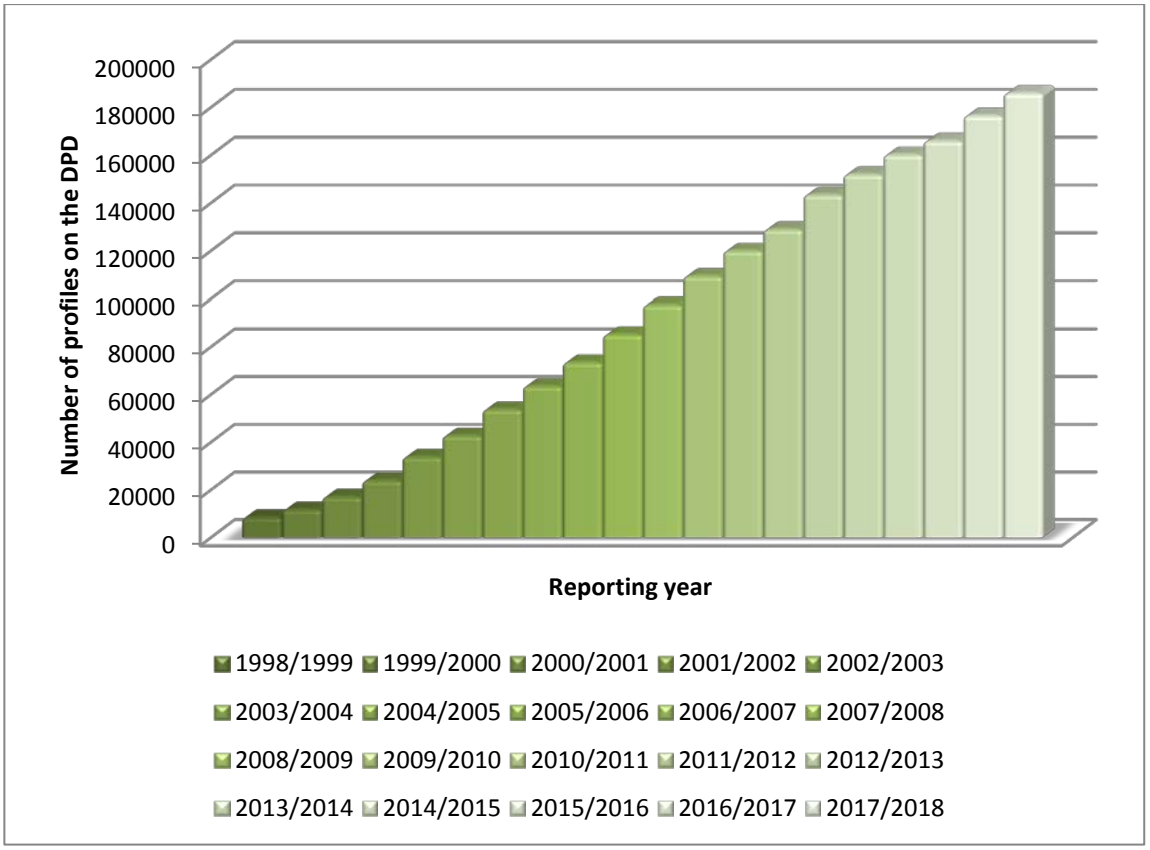
11.46 In 2009, the range of offences was broadened again to include all imprisonable offences and the offence of peeping and peering. In addition, the Temporary Databank came into existence. This had a significant impact on the composition of the known person databank.

Trends

11.47 The Commissioner of Police is required to report annually on certain information regarding the known person databank.[52] The information in this section draws on the data from Police annual reports. Each reporting year runs from 1 July until 30 June the following year and therefore crosses two calendar years.

11.48 The following graph demonstrates the pace at which the DPD has grown in the last 20 years.

Graph 1: DPD growth rate



51 The select committee was persuaded to add these offences by evidence showing that "of those people convicted of serious sexual or violent offending, 94 per cent have previous convictions for burglary and entering with intent": (12 October 1995) 551 NZPD 9722.

52 Criminal Investigations (Bodily Samples) Act 1995, s 76.

11.49 The graph shows that the DPD has grown at a fairly steady rate with approximately 10,000 profiles added every year since 2003.[53]

11.50 Trends in the Temporary Databank are a little more difficult to identify as the number of profiles fluctuates significantly during the year as profiles are added, removed or transferred to the DPD. This means year-end data shows a very small snapshot of what may be happening to the Temporary Databank during that year. For example, at 30 June 2012, there were 6,405 profiles on the Temporary Databank; at 30 June 2014, 1,508 profiles; at 30 June 2016, 7,851 profiles; and at 30 June 2018, 8,286 profiles.

Snapshot of the known person databank

11.51 In total, as at 30 June 2018, there were 194,305 DNA profiles on the known person databank, comprising 186,019 profiles on the DPD and 8,286 profiles on the Temporary Databank. This equates to approximately 3.9 per cent of the New Zealand population having a profile on the known person databank.[54] This compares to known person databanks internationally as follows: England and Wales – 8.2 per cent of the population; Scotland – 6.09 per cent; United States – 4.9 per cent; Australia – 3.4 per cent; Canada – 1.0 per cent; and in 17 European countries – between 0.1 and 2.9 per cent.[55]

11.52 Graph 2 shows the means by which the profiles on the DPD were obtained. Of note:

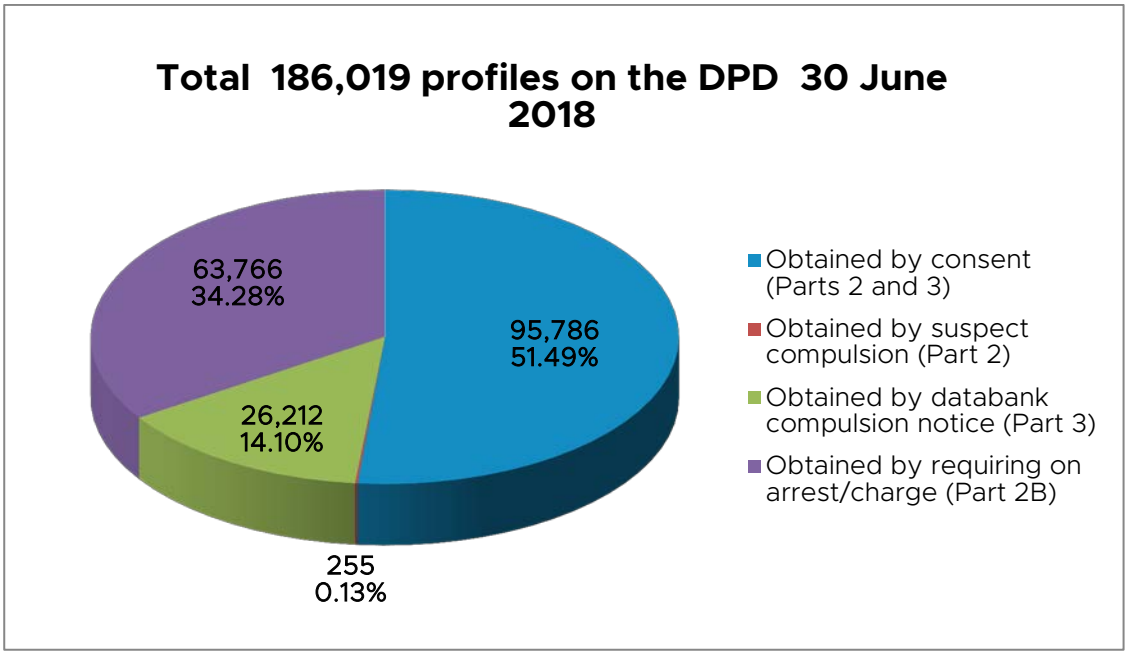
- just over half of the profiles were obtained by consent under Parts 2 and 3; and
- a third of the profiles were obtained from people who were arrested (or who Police intended to charge) under Part 2B.

53 These numbers reflect the net growth. This is an important distinction because profiles are routinely removed from the known person databank.

54 Calculated using a population of 4,918,410 from the Stats NZ population clock – <http://archive.stats.govt.nz/tools_and_services/population_clock.aspx> accessed on 13 November 2018 at 09:55:17 pm on the basis of a total of 194,305 DNA profiles on the known person databank as at 30 June 2018.

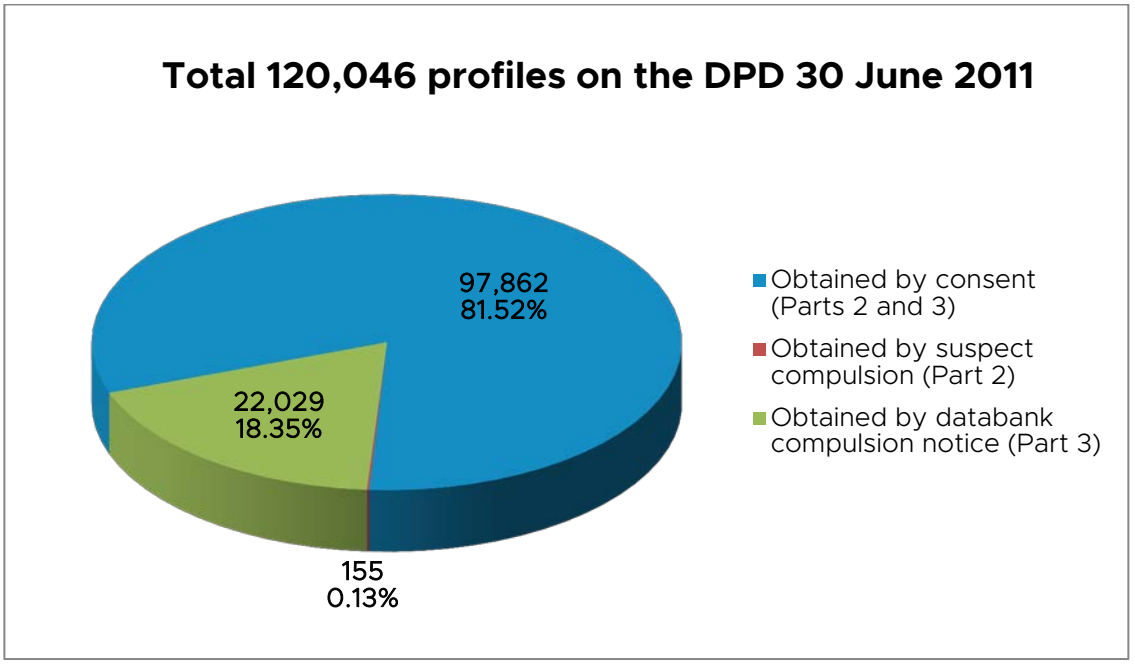
55 The English and Welsh statistic was calculated based on a population of 58,744,595 as at 30 June 2017 (the most up-to-date figure available via "Population estimates for the UK, England and Wales, Scotland and Northern Ireland: mid-2017" (28 June 2018) Office for National Statistics <www.ons.gov.uk/peoplepopulationandcommunity>) on the basis of a total of 4,835,913 English and Welsh DNA profiles on the National DNA Database as at 30 June 2017: "National DNA Database Statistics, Q1 2017 to 2018" 11 October 2018 National DNA Database statistics <www.gov.uk>. The Scottish statistic was calculated based on a population of 5,424,800 as at 30 June 2017 (the most-up-to-date figure available via "Population of Scotland" (2017) National Records of Scotland <www.nrscotland.gov.uk>) on the basis of a total of 330,434 profiles on the Scottish DNA Database as at March 2017: "Scottish DNA Database Statistics 2016/2017" (2017) Scottish Police Authority <www.spa.police.uk>. The United States statistic was calculated based on a population of 328,054,892 from the US Government population clock: <www.census.gov/popclock/> accessed on 5 September 2018 at 11.24am, on the basis of a total of 13,449,608 offender profiles and 3,210,059 arrestee profiles on the Combined DNA Index System (CODIS) as at July 2018: "CODIS – NDIS Statistics" (2018) FBI Services <www.fbi.gov>. The Australian statistic was calculated based on a population of 24,899,100 as at 1 March 2018: "3101.0 – Australian Demographic Statistics, Mar 2018 (March 2018) Australian Bureau of Statistics" <www.abs.gov.au> on the basis of a total of 837,000 DNA profiles on CrimTrac as at July 2018: "National Criminal Investigation DNA Database" (2 November 2018) Australian Criminal Intelligence Commission <www.acic.gov.au>. The Canadian statistic was calculated based on a population of 37,058,856 as at 1 July 2018 from Canadian government figures: "Key Figures" (1 July 2018) Statistics Canada <www.statcan.gc.ca> on the basis of a total of 370,385 DNA profiles in the Convicted Offender Index of the Combined DNA Index System (CODIS) as at 30 June 2018: "Statistics for National DNA Data Bank" (30 September 2018) Royal Canadian Mounted Police <www.rcmp-grc.gc.ca>. The data from European countries was sourced from Filipe Santos, Helena Machado and Susana Silva "Forensic DNA databases in European countries: is size linked to performance?" (2013) 9 LSSP 1 at 7.

Graph 2: Composition of the DPD as at 30 June 2018



11.53 It is interesting to compare Graph 2 to the composition of the DPD seven years earlier and see how it has changed. Graph 3 shows the composition of the DPD as at 30 June 2011. This was just prior to Part 2B profiles being added to the DPD.[56]

Graph 3: Composition of the DPD as at 30 June 2011



11.54 As Graph 3 shows, at 30 June 2011, the overwhelming majority of profiles on the DPD were obtained by consent under Parts 2 and 3. Since then (as shown in Graph 2), there has only been a small increase in the total number of profiles obtained under those Parts.

[56] The 2009 changes did not come into effect until 2010. Initially, Part 2B samples collected from those people Police arrested or intended to charge were placed on the Temporary Databank. The profiles then only transferred to the DPD on a person's conviction. It was not until the 2011–2012 recording year that Part 2B profiles were recorded as being added to the DPD.

Instead, the growth in the DPD has come from the addition of Part 2B profiles. It is therefore evident that the addition of Part 2B to the CIBS Act has significantly affected the composition of the DPD.

Collection for the known person databank

Obtained by consent

11.55 From the figures Police report each year, it is clear that, until 30 June 2011, consent was the most common way of obtaining DNA samples for the DPD.[57] Most were obtained as databank consent samples under Part 3 (and the profiles then added to the DPD). A few were suspect samples obtained by consent under Part 2 and those profiles transferred to the known person databank upon conviction.[58]

11.56 The number obtained as databank consent samples increased year on year from the CIBS Act's inception until 30 June 2003. At that point, the collection of databank consent samples stabilised at approximately 9,000 samples per year up until 2009–2010.[59] This is illustrated in Graph 4.[60]

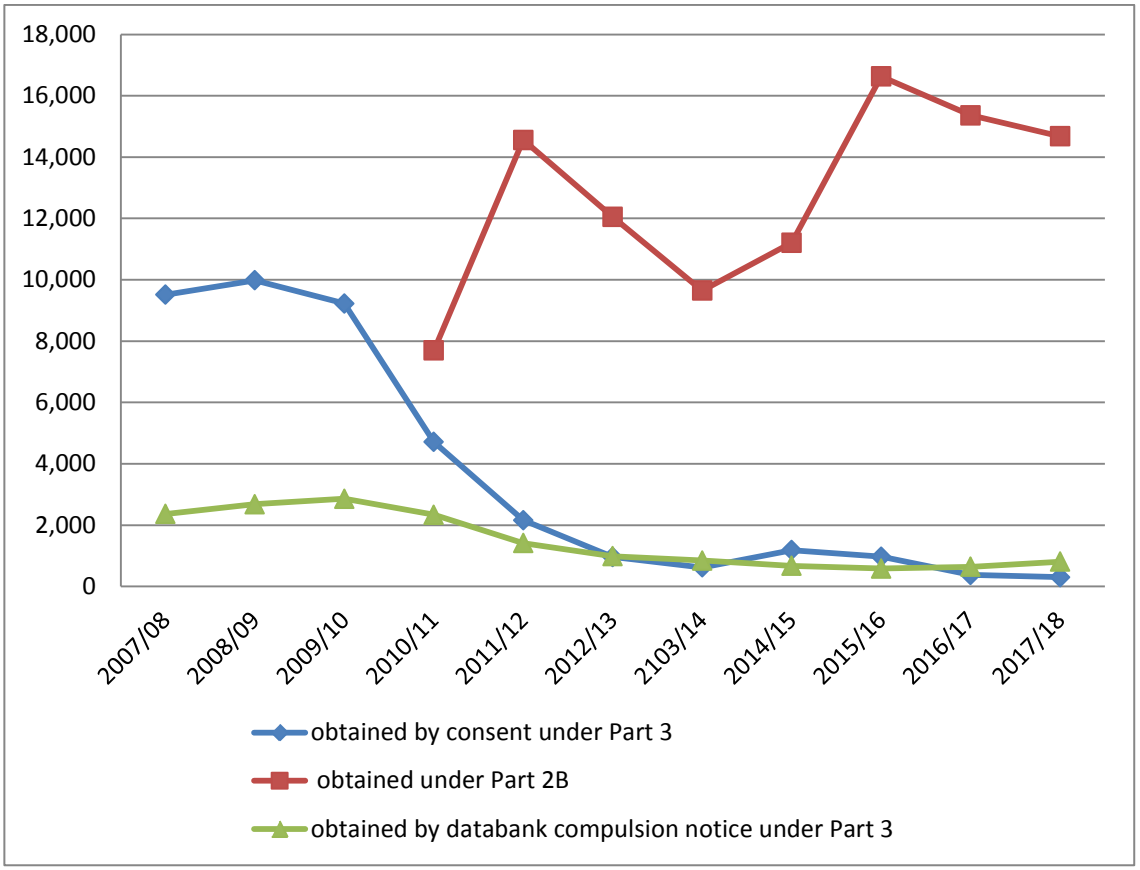
57 Section 76(1)(f) of the Criminal Investigations (Bodily Samples) Act 1995 requires the total number of DNA profiles stored on the DPD at the end of the period under review to be reported and broken down into those obtained by consent, by compulsion order and by databank compulsion notice. Police also chooses to report on the number obtained under Part 2B.

58 It is hard to determine exactly how many were samples collected under which category, as Police is not required to separately report on the number of suspect samples obtained by consent under Part 2 nor which ones are then transferred to the databank. Police advises that fewer than 800 suspect consent samples are obtained each year: for the period 2010–2011 to 2017–2018, between 341 and 730 suspect samples were obtained by consent each year. Between 25 and 74 of these were consented as dual request samples. This means that those particular profiles would have been added to the DPD after the dual sample was obtained. We do not know how many of the remaining suspect consent profiles were transferred to the DPD upon the person's conviction but it is unlikely to be all of them.

59 As noted above, as at 30 June 2011, of the 120,046 profiles on the DPD, 97,862 (82 per cent) had been obtained by consent, with the majority of these being obtained as databank consent samples.

60 Rather than representing the data from 1995 to date, we have chosen to represent the last 10 years' figures in order to give a recent indication of the types and numbers of samples collected for the known person databank and in particular to illustrate the changes that occurred in collection when Part 2B was added to the Act. We have not represented samples collected under Part 2 that are then transferred to the known person databank (suspect consent profiles or suspect compulsion profiles) as not all of these figures are reported upon by Police, and in addition (and more importantly), these samples are not obtained primarily for the known person databank but rather for casework and forensic comparison.

Graph 4: Main means of collecting profiles for the known person databank



11.57 As can be seen from Graph 4, collection of databank consent samples dropped significantly in 2010–2011, which was when Part 2B samples began to be collected for the Temporary Databank. That year, only 4,712 databank consent samples were obtained under Part 3 compared to 7,700 samples obtained under Part 2B.[61] The number of databank consent samples collected since has continued to decrease.

Required at the time of arrest/intention to charge

11.58 Police is required to report annually on the number of occasions where a biological sample has been obtained under Part 2B.[62] Graph 4 shows the number of samples obtained under Part 2B (and added to the Temporary Databank) has increased from 7,700 in 2010–2011 to 14,679 in 2017–2018.[63] Not all profiles on the Temporary Databank are transferred to the DPD. A transfer only occurs upon a conviction.[64] Nevertheless,

61 These graphs compare the samples (as opposed to profiles) obtained. Not all Part 2B samples have profiles generated from them. Although we do not have the data, it is likely that the majority of databank consent samples and databank compulsion notice samples would have been analysed and the resulting profiles added to the known person databank.

62 Criminal Investigations (Bodily Samples) Act 1995, s 76(1)(eb).

63 Not all of these samples were analysed and converted into DNA profiles – on average, approximately 1,000 fewer are added to the Temporary Databank each year than are obtained as samples. Police reports separately on this under section 76(1)(ec) of the Criminal Investigations (Bodily Samples) Act 1995. We understand from Police that sometimes the discrepancy is because the sample was not obtained correctly and could not be analysed or a charge was not filed (perhaps in relation to a young person as a family group conference needs to determine whether or not charges should be filed) or a supervisor may have determined the sample had been wrongly obtained.

64 We have calculated that approximately 8,500 profiles per year have been added annually over the last five years. This is based on the per annum increases for Part 2B profiles held on the DPD. This is recorded in the Police annual reports for the reporting years 2013–2014 to 2017–2018 pursuant to s 76(1)(f) of the Criminal Investigations (Bodily Samples) Act 1995.

since Part 2B was introduced into the CIBS Act, it became the main means by which samples are obtained for the known person databank.

Obtained by databank compulsion notice

11.59 From the CIBS Act's inception until 2003–2004, Police obtained an average of around 900 databank compulsion orders each year under Part 3. When databank compulsion notices were introduced in 2003, the numbers steadily increased to a high of 2,859 in 2009–2010 (Graph 4). Once Part 2B came into effect, the number of databank compulsion notices then steadily declined, and in 2016–2017, only 642 samples were obtained in this manner.[65]

11.60 Databank compulsion notices are very rarely challenged in court. In the 2017–2018 reporting year, there were only four hearings challenging the notice and all were upheld. In the 14 years since databank compulsion notices were introduced, only five have been held to be ineffective (and samples were unable to be obtained in those cases).[66]

11.61 Databank compulsion notices are now the second most common way for Police to obtain profiles for the known person databank.

Suspect profile transfer (compulsion/ juvenile compulsion only)

11.62 As noted in Chapter 8, fewer than 100 suspect or juvenile compulsion orders are obtained each year. From the data available, it is not possible to determine how many of these are transferred to the DPD on a person's conviction in any given year.[67] There are currently only 255 such profiles held on the DPD.[68] This is by far the least common collection method.

The triggering offences

11.63 Of the four methods of collection for the known person databank, only consent samples do not involve a triggering offence. For the other methods, the person is either suspected of, arrested for/intended to be charged with or convicted of a particular offence, and it is that offence that triggers the power to obtain a biological sample.

11.64 To get a sense of the offences that trigger the use of these collection powers, we analysed data that Police provided to us regarding the exercise of these powers between April and June 2016. During this period, 4,291 samples were obtained – 4,106 (using Part 2B) for the Temporary Databank (96 per cent) and 185 (using a databank compulsion notice) for the DPD (4 per cent). Table 1 breaks this figure down by collection method and category of triggering offence.

65 New Zealand Police *Annual Report 2016-2017* (November 2017) at 141. Note there was a spike in 2017–2018 when 809 samples were obtained, but that was due to a legislative change that enabled Police to issue databank compulsion notices in respect of offenders returning to New Zealand from overseas: Returning Offenders (Management and Information) Act 2015, s 14.

66 One in 2007–2008, two in 2011–2012 and one in each of the 2012–2013 and 2013–2014 reporting years. Reported under section 76(1)(ce)(iii) of the Criminal Investigations (Bodily Samples) Act 1995.

67 Criminal Investigations (Bodily Samples) Act 1995, s 76(1)(f). It has only been possible to isolate out the suspect compulsion orders held since 2004–2005 when databank compulsion orders were replaced by databank compulsion notices. However, the picture is not clear, as the numbers held fluctuate from year to year due to Police replacing these with Part 2B samples where possible. The highest number of suspect and juvenile compulsion profiles recorded as being held on the DPD was 284 in 2006–2007: New Zealand Police *Annual Report 2006-2007* (October 2007) at 92.

68 New Zealand Police *Annual Report 2017-2018* (October 2018) at 147.

Table 1: Collection method and category of triggering offence

	DATABANK COMPULSION NOTICE	PART 2B	PERCENTAGE OF THE TOTAL
Violent or serious	28	1,760	42%
Dishonesty/property	22	1,343	32%
Drug	11	453	11%
Driving	9	281	7%
Sexual	5	186	4%
Overseas conviction	110	0	3%
Other	0	83	2%
Total	185	4,106	-

11.65 Table 1 indicates that most of the samples obtained for the known person databank during this three-month period were after a person was arrested (or where Police intended to charge the person) for violent or serious offending (1,760) or dishonesty offending (1,343).

11.66 The data can be broken down further into some of the sub-categories of offending and the numbers of samples obtained for each:

- Violent or serious – serious violence (820); common assault (365); firearm offending (201).
- Dishonesty/property – burglary (335); theft (282); wilful property damage (219).
- Drug offences – cannabis (268); Class A drugs (174).

11.67 Some samples were obtained for comparatively minor triggering offending such as trespass and offences under the Summary Offences Act 1981 (wilful damage, common assault and resisting police) and offences where, on the face of it, DNA does not appear to be relevant or relevant to past offending, such as fraud, driving with excess breath alcohol and other driving-related offences.

11.68 There are two caveats that need to be borne in mind when looking at this data. First, it represents only a three-month window. Second, the triggering offence is not the only factor that is relevant when a police officer exercises their discretion to obtain a biological sample under Part 2B. As discussed above, the Police Manual states that the person's age and any previous convictions should also be taken into account.

Ethnicity and age of those on known person databank

Ethnicity

11.69 Since the 2009 amendments to the CIBS Act, Police has been required to report on the ethnicity of those sampled under Part 2B.[69] Police advises that this ethnicity information is drawn from the Police's National Intelligence Application system and is self-identified

[69] Criminal Investigations (Bodily Samples) Act 1995, s 76(2).

ethnicity information provided by those being sampled. This information is not related to the information provided in ESR's voluntary ethnicity form, which is separately collected.[70]

11.70 From this information, we have calculated that the average percentage range of Part 2B samples obtained from different ethnicities were:[71]

- 39–41 per cent Māori;
- 38–42 per cent European;
- 11–13 per cent Pacific Islander; and
- 6–8 per cent other ethnicity (or ethnicity was not specified).

Therefore, over this period, the proportion of samples obtained from different ethnicities has each remained within a tight range, despite the overall number of samples fluctuating.[72]

11.71 The ethnicity percentages noted broadly equate to the ethnicity percentages recorded by Statistics New Zealand regarding apprehensions.[73] However, given that Māori represent 15.75 per cent of the general population, their disproportionate representation in these statistics is a significant concern.

11.72 It is important to note that not all samples obtained under Part 2B end up as profiles on the DPD.[74] However, it is somewhat difficult to ascertain the ethnic makeup of the DPD as police is not required to report this information and has only captured this data since 2010.

11.73 To give us a sense of whose profiles are on the DPD, Police has provided data on the profiles added to the DPD each year between 2012 and 2018. This has been broken down by ethnicity (and age) in Table 2.

70 See discussion at [11.39] to [11.43].

71 Police collect ethnicity data for Asian; European; Indian; Latin American; Māori; Middle Eastern; Native African; Pacific Islander; Other; Unknown. See New Zealand Police *Annual Report 2010-2011* (October 2011) at 113; New Zealand Police *Annual Report 2011-2012* (October 2012) at 95; New Zealand Police *Annual Report 2012-2013* (October 2013) at 113; New Zealand Police *Annual Report 2013-2014* (October 2014) at 131; New Zealand Police *Annual Report 2014-2015* (October 2015) at 153; New Zealand Police *Annual Report 2016-2016* (October 2016) at 155; New Zealand Police *Annual Report 2016-2017* (November 2017) at 143; New Zealand Police *Annual Report 2017-2018* (October 2018) at 148.

72 Between (approximately) 7,700 and 16,500 per year (see Graph 4).

73 Calculated from the tables set out on the Stats NZ website: "Crime and justice" Stats NZ <www.stats.govt.nz>. 'Apprehension' means that a person has been dealt with by Police in some manner (for instance, a warning, prosecution, referral to youth justice family group conference) to resolve an offence: "New Zealand crime data 1975-2014" (1 April 2015) Stats NZ <http://archive.stats.govt.nz>.

74 Some samples are not analysed and therefore no profile is generated (for instance, if a person was not later charged or if the sample was not of adequate quality). Of the profiles that are generated and placed on the Temporary Databank, the profile is transferred only if a person is convicted.

Table 2: Ethnicity and age breakdown of profiles added to the DPD

	EUROPEAN			MĀORI			PACIFIC PEOPLES			OTHER OR UNKNOWN			
	Adults	Young persons	% of profiles each year	Adults	Young persons	% of profiles each year	Adults	Young persons	% of profiles each year	Adults	Young persons	% of profiles each year	Total profiles added each year
2012–2013	4,379	80	43%	3,976	266	41%	1,060	49	11%	582	3	6%	**10,395**
2013–2014	3,436	60	42%	3,254	169	41%	867	33	11%	539	6	7%	**8,364**
2014–2015	3,691	68	40%	3,832	214	43%	961	30	11%	545	4	6%	**9,345**
2015–2016	4,939	89	40%	4,903	319	42%	1,355	75	11%	859	9	7%	**12,548**
2016–2017	4,178	80	39%	4,332	308	42%	1,202	54	12%	752	14	7%	**10,920**
2017–2018	2,948	44	41%	2,849	148	41%	772	18	11%	495	1	7%	**7,275**
Total (Average %)	**23,992**		**41%**	**24,570**		**42%**	**6,476**		**11%**	**3,809**		**6%**	58,847

11.74 As can be seen from Table 2, the ethnic breakdown of the profiles added to the databank in this period is very similar to the ethnic breakdown of samples obtained under Part 2B. This suggests that profiles are being transferred to the DPD in roughly the same proportions as they are being obtained. We can infer that there would be a similar ethnic breakdown in respect of all 186,019 profiles held on the DPD. This would mean that, as in other criminal justice statistics, Māori are disproportionately represented on the DPD.

Age

11.75 Children and young persons cannot be asked to provide a sample for the DPD by consent, but their profiles may be obtained by suspect profile transfer or databank compulsion notice. Young persons may also be required to provide a sample if they are detained under Part 2B (and the DNA profile generated may then be added to the Temporary Databank if they are later charged with the offence for which they were detained).

11.76 We do not have overall data on the number of samples obtained from children and young persons. Police, however, is required to report whether samples obtained under Part 2B are from adults or young persons.[75] The annual reports show that, since 2010–2011, Police has obtained between (approximately) 300 and 750 biological samples under Part 2B from young persons each reporting year. That equates to 3–6 per cent of the total number of samples annually obtained under Part 2B.

75 Criminal Investigations (Bodily Samples) Act 1995, s 76(2).

11.77 In terms of the number of profiles of children and young persons held on the known person databank overall, ESR has calculated that there are currently 4,277 DNA profiles obtained from people when they were under 17 years of age. This equates to 2.3 per cent of the total number of profiles.

11.78 Police has provided us with data on the number of profiles added to the DPD from children and young persons each year between 2012 and 2018 along with their ethnicities. It is not possible to ascertain from the data if the profiles were from children or young persons. However, it is unlikely that many profiles are from children, as they cannot be prosecuted for very many offences[76] and their samples cannot be obtained under Part 2B (which is the basis on which the majority of the profiles were transferred).[77] This information is shown in Table 3.

Table 3: Profiles from young persons and children added to the DPD

	EUROPEAN		MĀORI		PACIFIC PEOPLES		OTHER OR UNKNOWN		TOTAL PROFILES ADDED EACH YEAR
	Total	% of profiles each year	Total	% of profiles each year	Total	% of profiles each year	Total	% of profiles each year	
2012–2013	80	20%	266	67%	49	12%	3	1%	**398**
2013–2014	60	22%	169	63%	33	12%	6	2%	**268**
2014–2015	68	22%	214	68%	30	9%	4	1%	**316**
2015–2016	89	18%	319	65%	75	15%	9	2%	**492**
2016–2017	80	18%	308	68%	54	12%	14	3%	**456**
2017–2018	44	21%	148	70%	18	9%	1	0%	**211**
Total (Average %)	**421**	**20%**	**1,424**	**67%**	**259**	**12%**	**37**	**2%**	2,141

[76] See Chapter 8.

[77] From other information provided by Police, it is evident that by far the majority of profiles transferred to the DPD in this period were obtained as Part 2B samples. For instance, for the reporting years 2012–2013 to 2015–2016, 96 profiles were transferred to the DPD under Part 2 (suspect profile transfer) or Part 3 (databank compulsion notice). The balance of 1,422 profiles were obtained under Part 2B for the Temporary Databank and then transferred on a young person's conviction to the DPD. (Conviction here includes a charge that was proved in the Youth Court – even if the charge was discharged after being proven.)

11.79 There are two points worth highlighting. First, 67 per cent (on average) of the profiles from children and young persons added to the DPD during this period were from Māori children and young persons. This is significantly higher than the proportion for all Māori recorded in Table 2 above, which, as we have noted, already equates to an over-representation. Over the 10-year period from 2005–2014, rangatahi Māori represented on average 50 per cent of all young persons apprehended by Police. While we appreciate that the two periods only have two overlapping years (the 2012–2013 and 2013–2014 reporting years) and the numbers of samples obtained are in the hundreds compared to the thousands of apprehensions, 67 per cent is still a concerning figure.

11.80 Second, as Table 3 shows, 2,141 children and young persons have had their profiles transferred onto the DPD in the last six years. (These profiles will be retained for at least four years and, more commonly, 10 years or indefinitely.)[78] This equates to half of the total number of profiles that ESR calculated are currently held on the known person databank of 4,277. Therefore, in a six-year period, the number of profiles of young persons and children held on the databank has doubled. It is clear that the addition of Part 2B to the CIBS Act has had a significant effect on young persons in general and on rangatahi Māori in particular.

Which DNA profiles are producing matches?

11.81 If a comparison between the CSD and the known person databank results in a match, that information is forwarded to Police in the form of a link report. Since 2004/2005, Police has been required to report annually on the number of matches between the CSD and the known person databank – in particular, matches to profiles obtained under Parts 2B and 3.[79] Table 4 shows the historical trends.

Table 4: Matches between the CSD and known person databank

	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
Matches between Part 2B and the CSD	N/A[80]	N/A	N/A	N/A	N/A	N/A	808	1,497	1,007	1,087	1,417	1,901	2,427	1,911
Matches between Part 3 and the CSD	1,996	1,904	2,185	2,176	1,922	1,753	506	1,134	324	1,952	951	740	918	588
Total matches	1,996	1,904	2,185	2,176	1,922	1,753	1,314	2,631	1,331	3,039	2,368	2,641	3,345	2,499
Matches as proportion of the total number of databank profiles	3.7%	3.0%	3.0%	2.6%	2.0%	1.6%	1.1%	2.0%	0.9%	2.0%	1.5%	1.6%	1.9%	1.3%
Total profiles on databank	**53,850**	**63,572**	**73,555**	**85,175**	**97,585**	**10,9343**	**12,0046**	**12,9001**	**14,3486**	**15,2044**	**16,0296**	**16,6072**	**17,6625**	**18,6019**

78 For a further discussion of the retention periods for young persons, see Chapter 14.

79 Pursuant to subsections 76(1)(ed), (ee), (g) and (h) of the Criminal Investigations (Bodily Samples) Act 1995, Police must report on how many times in a given year there have been matches (links) between DNA profiles obtained under different parts of the Act and crime scene profiles.

80 Part 2B and the requirements to report on the matches were not introduced into the legislation until 2009 through section 7 of the Criminal Investigations (Bodily Samples) Amendment Act 2009.

11.82 Table 4 shows that, between 2004–2005 and 2010–2011, the number of matches was approximately 1,700 to 2,200 per year.[81] These figures pre-date the introduction of Part 2B, so all of the matches relate to Part 3. Since 2010–2011 when Part 2B came into force, the number of matches has ranged between approximately 1,300 and 3,400 per year.[82]

11.83 As a proportion of the total profiles held on the known person databank, the number of matches to the CSD decreased in 2009–2010 to 1.6 per cent and has not since risen above 2 per cent. Previously, it was as high as 3.7 per cent. Therefore, as the known person databank has expanded, the proportion of matches has decreased.

11.84 This suggests that adding more profiles to the known person databank may not have improved its effectiveness very much. The same group of people may still be responsible for most of the matches.

11.85 In any event, as highlighted Chapter 10, link rates are limited as a measure of effectiveness as they give no indication whether the match proved to be of any use in the associated criminal investigation. In addition, the link rate will also include matches to victims and to third parties.

ISSUES

11.86 Unless New Zealand opts for a universal DNA profile databank, there needs to be a legitimate reason for the State to retain the DNA profiles of some people and not others. The real issue is where and how to draw the line. What is reasonable and proportionate? And how can we ensure that there is consistent application of the rules? When considering consistency, there is also a particular need to ensure that the statutory framework is consistent with the Treaty of Waitangi principles of equity and partnership. The collection and retention of DNA samples and profiles has a disproportionate impact on Māori. As highlighted in the previous section, the data shows that Māori are already disproportionately represented on the DPD. This is particularly the case for rangatahi Māori.

11.87 Below we discuss various issues associated with the collection of profiles for the known person databank. First, we briefly deal with two discrete issues that arise from the collection process – the use of reasonable force and the ESR voluntary ethnicity form. We then discuss inter-related issues around the following:

(a) Who currently qualifies for databank sampling – the who.

(b) How police officers decide to obtain such samples – the how.

(c) Whether it is appropriate to obtain samples upon arrest/intention to charge – the when.

The collection process

Physical collection

11.88 In Chapter 8, we outlined a variety of issues around the physical process of collecting suspect and elimination samples directly from known persons for the purposes of casework. Those issues arise equally in relation to databank sampling. Our concerns

[81] There has been an average of 1,989 matches per reporting year over this period.

[82] There has been an average of 2,396 matches per reporting year over this period.

about the physical intrusion on privacy are the same, and the issues we raised about the use of reasonable force are amplified in the context of Part 2B.[83] That is because there is no court oversight over the decision to compel a person to provide a sample for the Temporary Databank. Further, the number of samples taken by force each year under Part 2B is much higher than under Parts 2 or 3 (where, in combination, only one or two samples are taken by force each year). Over the last five years, samples have been obtained by force under Part 2B between three and 19 times.[84] This problem may be addressed by only having one procedure for obtaining biological samples at the point of arrest/intention to charge and for there to be judicial oversight of that process. We discuss that option in Chapter 8 and below.

ESR voluntary ethnicity form

11.89 An additional collection issue that only arises in the context of databank sampling (under Parts 2B or by consent under Part 3) is the use of the ESR voluntary ethnicity form. This form asks a person to provide information about the ethnicity of their family members going back three generations. This request is made at a time when their DNA is being obtained on the basis that the State, in some way, suspects them of past or future criminal offending. The message that this sends about the connection the State sees between ethnicity, genetics and criminal behaviour appears wrong.[85] This is especially so when most of those who are given this form are being compelled to provide a sample under Part 2B (due to the fact that most samples are now obtained under this Part).

11.90 The sensitivities surrounding the ESR voluntary ethnicity form were explored by the Law and Order Select Committee, ESR, Police and the Privacy Commissioner between 2002 and 2006. This was in relation to a proposed amendment to the CIBS Act to facilitate the collection of this ethnicity information.[86] This amendment did not take place but it was agreed by all parties (once the form had been reviewed by the Privacy Commissioner) that the form could be given only to those providing databank consent samples under Part 3, without a statutory mandate.[87] The Privacy Commissioner reviewed the form, and Police and ESR responsibly conducted an audit of their practices around the collection and storage of this information.[88] Unfortunately, when Part 2B was introduced, the

83 See discussion in Chapter 8.

84 Police is required to report these figures under section 76(1)(ef) of the Criminal Investigations (Bodily Samples) Act 1995. The figures were three in the 2013–2014 reporting year: New Zealand Police *Annual Report 2013–2014* (October 2014) at 130; 10 in the 2014–2015 reporting year: New Zealand Police *Annual Report 2014–2015* (October 2015) at 152; four in the 2015–2016 reporting year: New Zealand Police *Annual Report 2015–2016* (October 2016) at 154; 14 in the 2016–2017 reporting year: New Zealand Police *Annual Report 2016–2017* (November 2017) at 142; and 19 in the 2017–2018 reporting year: New Zealand Police *Annual Report 2017–2018* (October 2018) at 147.

85 In addition, we note that framing ethnicity with reference to blood quantum is out of line with how the New Zealand Government collects ethnicity data in other contexts and is viewed internationally as somewhat outdated. See "Māori Descent" Stats NZ <http://archive.stats.govt.nz>; and Tahu Kukutai "The Problem of Defining an Ethnic Group for Public Policy: Who is Māori and Why Does it Matter?" (2004) 23 Social Policy Journal of New Zealand 86.

86 Institute of Environmental Science and Research "Submission to the Law and Order Select Committee on the Criminal Investigations (Bodily Samples) Amendment Bill 2002". ESR submitted that the Bill should expressly allow for the storage of ethnicity information alongside profiles in the DNA Databank through the use of the voluntary ethnicity form.

87 Letter from Wayne Chisnall (General Manager Forensic Business Group, ESR) to Blair Stewart (Assistant Privacy Commissioner) regarding collection and storage of ethnicity information (15 August 2003); Letter from Blair Stewart (Assistant Privacy Commissioner) to Wayne Chisnall (General Manager Forensic Business Group, ESR) regarding collection and storage of ethnicity information in relation to the DNA Databank (26 September 2003). The parties also agreed to make the word "voluntary" more prominent on the form and make the questions less personally intrusive.

88 Letter from Jill Vintiner (DNA Databank Manager) to Inspector John Walker (Acting Forensic Services Adviser, Office of the Privacy Commissioner) regarding Audit of the Databank (7 December 2004); Letter from Jill Vintiner (DNA

agreed restriction of only giving the form to people providing samples by consent appears to have been overlooked.[89]

11.91 We accept that there is a need to calculate accurately the likelihood ratios that are used to provide DNA evidence in court and that, to do so, ESR needs to analyse New Zealand-specific ethnicity data. However, we question whether this data is still required (given that the Y-STR ethnicity databank already contains over 4,000 profiles) and, if so, whether there is a more appropriate way to collect it.

The who – who qualifies for databank sampling?

The proportionality assessment

11.92 As noted above, when considering whose DNA profiles should be uploaded to the known person databank, proportionality is a central consideration.

11.93 As explained in Chapter 2, the principle of proportionality lies at the heart of section 21 of the New Zealand Bill of Rights Act 1990 (NZBORA), which protects against unreasonable search and seizure. The principle of proportionality is that State intrusion into an individual's privacy should be proportionate to the public interest in the investigation and prosecution of the offence or the maintenance of the law. Ordinarily, this assessment is made with reference to a specific offence. Although obtaining a person's DNA profile for the known person databank is a search, it is not one conducted in relation to a specific offence. Instead, the aim is to see whether the person can be linked to unspecified previous or future offending. The Police Manual explains:[90]

> DNA Databank samples are taken so that a DNA profile can be derived from it and stored on the National DNA Profile Databank. This increases the chances of identifying suspects by linking these databank profiles with DNA samples taken from:
>
> • future crime scenes, or
>
> • historic (unsolved) crime scenes.

11.94 In other words, any DNA profile added to the known person databank is regularly compared against crime scene profiles on the CSD. The ultimate goal of the comparison or "speculative search" is to link a known person's profile to a crime scene profile. As discussed in Chapter 10, any links from this process are reported by ESR to Police.

11.95 This type of speculative search sits uncomfortably within the wider body of search and surveillance law but is considered justified worldwide because known person databanks assist in resolving investigations into serious criminal offending. However, as we explained in Chapter 10, there is no seriousness threshold when it comes to the CSD and therefore crime scene profiles associated with relatively minor offending are uploaded onto it. This means links between known people and minor crimes will occur. This in turn

Databank Manager) to Blair Stewart (Assistant Privacy Commissioner) regarding collection and storage of ethnicity information on the DNA Databank (6 June 2006); Letter from John Walker (Inspector, National Forensic Services Adviser) to Jill Vintiner (DNA Databank Manager) regarding National DNA Databank audit – ethnicity information (1 September 2006); Letter from Lindy Siegert (Office of the Privacy Commissioner) to Jill Vintiner (DNA Databank Manager) regarding report of audit by New Zealand Police on ethnicity information (9 November 2006). The audit found that ESR had implemented the requested changes to the form and were only using it in voluntary samples.

89 Overall, very few ESR voluntary ethnicity forms are completed and therefore few have their profiles included in the Y-STR population databank. ESR thinks that, on average, approximately 15 per cent of people sampled by Police complete them. See Chapter 6 for further discussion of the Y-STR population databank.

90 Police Manual *DNA Sampling* at 26.

may have a disproportionate impact on some groups and on Māori in particular. Furthermore, as we indicated in Chapter 10, no data is currently collected as to how useful the link reports are in resolving investigations.

11.96 A second difficulty is assessing the degree of intrusion inherent in obtaining a person's DNA profile for the known person databank. As we have discussed throughout this issues paper, the degree of physical intrusion has decreased since buccal (mouth) sampling was introduced in 2003 and could decrease further if new sampling methods are introduced. However, the intrusion on informational privacy is increasing as we learn more about DNA. As explained in Chapters 3 and 10, there is no real limit on how much information could be included in a DNA profile.[91] At present, it is 15 to 21 STRs, but that may change. Also, once a known person's profile is matched to the profile generated from a crime scene sample, any information generated from the crime scene sample is also attributable to the known person, and crime scene samples may be the subject of extensive analysis.

11.97 As noted in Chapter 9, the intrusion on informational privacy is not necessarily just a concern for the individual. It is also important to consider the potential for a collective privacy interest in DNA information. Whakapapa information is considered tapu and has been described as a taonga. From a Māori perspective, DNA could be considered private information that relates to a group. As Māori are disproportionately represented on the DPD, the effect of this intrusion is amplified. Recognising a collective privacy interest in DNA may also accord with international developments in privacy law.[92]

11.98 In the 2017 case of *R v Toki*, the Court of Appeal described the degree of intrusion as follows:[93]

> The seriousness of the violation to Mr Toki's person does not consist solely in a discrete instance of physical contact. It extends to denying him the opportunity to consent properly to a procedure which enables the state to conduct ongoing surveillance of his behaviour with molecular precision …
>
> … Moreover it is trite that DNA is not a mere fingerprint: it contains a wealth of genetic information about a person with unlimited future utility. The one-off intrusion of the procedure thus permanently erodes Mr Toki's privacy and freedom, which would usually remain beyond the reach of the state apparatus.

11.99 As we explain in Chapter 14, there is also a degree of stigma associated with having a profile on the known person databank, because it effectively categorises a person as "risky" and a "pre-suspect". Further, as we discuss later in this chapter, there is a danger of retaining "too many" profiles on the known person databank as it increases the chance of adventitious matches or false positives (in simple terms, a link to the wrong person). These can hinder, rather than help, investigations.[94] Again, given that Māori are over-represented on the DPD, both the stigma and the risk of adventitious matches impact disproportionately on Māori.

91 Either in terms of a crime scene profile or in terms of a profile of a known person. Both are currently analysed at between 15 and 21 STRs, but this is not regulated in any way. See discussion in Chapters 3 and 7.

92 Office of the Australian Information Commissioner "What is personal information?" (May 2017) <www.oaic.gov.au> at 12. See also discussion of collective privacy in Chapter 9.

93 *R* v *Toki* [2017] NZCA 513, [2018] 2NZLR at [23] and [24]. This observation was made in the context of Police seeking to rely on a databank consent sample under Part 3. Some key information was missing from the notice provided to Mr Toki at the time of sampling.

94 See the discussion on adventitious matches at [11.186] and in Chapter 14.

11.100 In summary, there is a serious intrusion on privacy for a societal benefit that is currently very difficult to quantify, even in a general sense. Two things are missing: debate on what type of offending should warrant crime scene profiles being uploaded to the CSD and data on the utility of link reports. Without these, it is very difficult to assess proportionality or to understand the extent of the impact that the DNA regime has on Māori.

The offence threshold

11.101 The 2009 amendment to the CIBS Act expanded the range of triggering offences to all imprisonable offences and the offence of peeping and peering.

11.102 As we discuss below, there was very little evidential basis to support the case for reform in 2009, and it is questionable whether evidence of the utility of those changes has emerged since.

11.103 In addition, there may also be an issue of consistency with other criminal justice system policies and practices. An example is the use of pre-charge warnings in relation to offending that is punishable by six months' imprisonment or less. We discuss this in more detail later in this chapter.

The justification for the 2009 expansion

11.104 As we observed in Chapter 4, the policy intent for the 2009 Amendment Bill, which expanded the range of triggering offences and introduced Part 2B, was:[95]

> to recognise DNA as the modern day fingerprint and to assist Police to solve more crime by having more identified DNA profiles to match against the increasing number of DNA samples obtained from scenes of unsolved crimes.

11.105 The Regulatory Impact Statement attached to the Amendment Bill stated that the new measures were designed to "substantially increase the size of the DNA profile databank":[96]

> This increased databank will aid criminal investigations by both linking offenders on the databank to previously unsolved crime scenes and potentially to future crime scenes. DNA's role in solving more crimes and prosecuting more offenders will in turn contribute to increasing public safety and public confidence in the justice system.

11.106 Treasury, in assessing the case for reform, noted that it was unclear what the problems were with the existing regime and highlighted the absence of an evidential basis (empirical or anecdotal) to support the changes.[97] As discussed in Chapter 1, the Attorney-General also voiced concern and reported to Parliament that the Amendment Bill was inconsistent with section 21 of NZBORA.[98] At the time, the (then) Privacy

95 Criminal Investigations (Bodily Samples) Amendment Bill 2009 (14-1) (explanatory note) at 1.

96 Regulatory Impact Statement attached to the Criminal Investigations (Bodily Samples) Amendment Bill 2009 (14-1) (explanatory note) at 15.

97 Treasury made this assessment in the context of assessing the Regulatory Impact Statement (RIS). It deemed the RIS to be inadequate for lack of identified problems or evidence in support: Regulatory Impact Statement attached to the Criminal Investigations (Bodily Samples) Amendment Bill 2009 (14-1) (explanatory note) at 14–15.

98 See Chapter 1. The Attorney-General's report (Christopher Finlayson *Report of the Attorney-General under the New Zealand Bill of Rights Act 1990 on the Criminal Investigations (Bodily Samples) Amendment Bill (2009)* (10 February 2009)) did not squarely address the expansion in the range of offences. Instead, it focused on obtaining DNA profiles pre-conviction and without court oversight – issues discussed later in this Chapter.

Commissioner directly addressed the issue of the expanded range of triggering offences in a submission to the select committee. She stated:[99]

> Collecting DNA samples for *all* imprisonable offences, by contrast, opens the gates wide, entailing significant costs and risks, both social and fiscal.
>
> The complete list of imprisonable offences is very long, and includes many offences of a minor nature, such as littering, lighting bonfires and opening mail without permission. There is no obvious link between an offence being imprisonable on the one hand and the Police being able to obtain a law enforcement benefit from getting a DNA sample on the other. There would also, inevitably, be considerable costs to the running and smooth operation of the programme, if it is expanded to the extent anticipated by … the Bill.

11.107 The select committee, reporting back on the Amendment Bill, noted the "considerable opposition" to the Bill, particularly to the introduction of Part 2B, and stated:[100]

> Section 6 of the New Zealand Bill of Rights Act requires an interpretation that is consistent with the Act be preferred when exercising a power contained in any enactment. The Police Operational Guidelines being developed by the New Zealand Police and the Ministry of Justice will guide the Police in the exercise of their new power by specifying the circumstances in which a sample is required.

11.108 In addition to the Police Operational Guidelines (which refer to the guidance on Part 2B now in the Police Manual),[101] Parliament put in place a second protective measure: to implement the Amendment Act in two stages. The first stage allowed Police to obtain DNA profiles from every person arrested (or who Police intended to charge) with a "relevant offence".[102] In summary, "relevant offence" includes serious sexual or violent offences, offences punishable by seven years' imprisonment or more (or attempts and conspiracies to commit these offences) or one of the 23 less serious offences specified in the Schedule to the CIBS Act). The second stage then came into effect in 2011, expanding this to all imprisonable offences or the offence of peeping and peering. Amongst other things, the staged approach was designed to "recognis[e] that the expansion and the use of DNA sampling and matching raises issues that are worthy of public debate".[103]

11.109 This history is important for two reasons. First, it calls into question the evidential basis for the significant expansion in triggering offences. Second, it is clear from the reliance that Parliament placed on the development of Police Operational Guidelines (to provide protection against a breach of NZBORA) that Parliament did not intend Police to obtain profiles from everyone Police intended to charge or arrest with an imprisonable offence or the offence of peeping and peering. However, the legal limitations on police powers are not immediately apparent to readers of the CIBS Act. The guidance on Part 2B in the

99 Privacy Commissioner "Submission to the Justice and Electoral Committee on the Criminal Investigations (Bodily Samples) Amendment Bill 2009" at [4.6]–[4.7].

100 Criminal Investigations (Bodily Samples) Amendment Bill 2009 (14-2) (select committee report) at 2.

101 See summary of guidelines in Police Manual at [11.30]–[11.38].

102 Criminal Investigations (Bodily Samples) Act 1995, ss 2 (definition of "relevant offence") and 24K. The definition of "relevant offence" now incorporates all the offences listed in the three Parts that comprise the Schedule to the Act. In summary, this includes serious sexual and violent offences; offences punishable by seven years' imprisonment or more (as well as attempts and conspiracies); and selected offences under the Animal Welfare Act 1999, the Arms Act 1983, the Crimes Act 1961, the Land Transport Act 1998 and the Summary Offences Act 1981 (peeping and peering). Of the relevant offences, 23 have a maximum penalty of less than seven years' imprisonment. Twenty of these are listed in Part 3 of the Schedule added in 2009. See discussion in Chapter 4 as to how the definition of "relevant offence" has changed since 1995.

103 (10 February 2009) 652 NZPD 1117–1118.

Police Manual (set out above at [11.30] to [11.35]) contains a more accurate description of the current legal position, but even that is not readily available to the general public.

11.110 In terms of the justification for the changes, as we noted earlier in this chapter, the known person databank has expanded significantly since 2009 and the number of matches to the CSD per year has also increased,[104] but we have no information on who was responsible for those matches. We do know that the proportion of profiles that match a crime scene profile has decreased. This suggests there may actually be quite a few "extra people" on the known person databank.

Consistency with pre-charge warnings

11.111 An additional problem is that the offence threshold in the CIBS Act is somewhat at odds with Police policy concerning pre-charge warnings. A pre-charge warning is an alternative to prosecution for offenders who meet the following criteria: over the age of 17 years; charged with an offence with a maximum of six months' imprisonment or less; and where the offence does not involve family violence or methamphetamine.[105] Even an offender with previous convictions can qualify for a pre-charge warning.[106]

11.112 The purpose of a pre-charge warning is to resolve offences that require Police intervention but do not warrant prosecution under the 'public interest test'.[107] It is intended to be an effective mechanism for holding the offender to account. The goal is for the warning to act as a circuit breaker and to provide an opportunity for rehabilitation. A 2016 report indicated that pre-charge warnings are given in just over a third of eligible cases nationally.[108]

11.113 Police has also been working with iwi to develop "Alternative Action Plans" for Māori, providing alternatives to prosecution in the case of minor offences.[109] This includes use of pre-charge warnings and conditional pre-charge warnings. Conditional pre-charge warnings involve referral to Iwi Justice Panels, with the aim that the person makes behavioural changes with the support of their iwi. We understand that use of these warnings has been working well, and Police advises that it is currently considering an "Alternative Resolutions Options" paper. One of the options is to broaden the eligibility threshold to include offences that carry a higher imprisonable threshold than the current six months. However, no decision has yet been made on whether the threshold will change.

11.114 There are a number of low-level offences where a person might be eligible for a pre-charge warning or a conditional pre-charge warning but for which a biological sample may be obtained and the resulting profile put on the known person databank indefinitely. These include offences such as disorderly behaviour, being unlawfully in an enclosed

104 For example, if a core group of people was responsible for the vast majority of criminal offending in New Zealand, as long as their profiles are being collected for the known person databank, the total number of matches will increase. Uploading the profiles of "extra people" arguably has no benefit in terms of effectiveness and may even decrease the databank's effectiveness by increasing the chance of a false positive or adventitious match (put simply, a match to the wrong person). See discussion at [11.186] and in Chapter 14.

105 Police Manual *Pre-charge warnings* at 4.

106 Independent Police Conduct Authority *Review of pre-charge warnings* (14 September 2016) at 4.

107 The "public interest test" is set out in the *Solicitor General's Prosecution Guidelines* (1 July 2013) at 8–10. It is based on the premise that there will be circumstances in which, although the evidence is sufficient to provide a reasonable prospect of conviction, the offence is not serious and prosecution is not required in the public interest.

108 Independent Police Conduct Authority *Review of pre-charge warnings* (14 September 2016) at 7.

109 Justine O'Reilly *A review of Police and iwi/Māori relationships (*New Zealand Police, October 2014) at 19–20.

yard or building, trespass, common assault, possession or use of cannabis, resisting or obstructing Police, shoplifting (under $500); theft (under $500) and receiving (under $500).[110]

11.115 There is a danger in having a broad discretion where there is the potential for two people who have committed the same offence to be treated very differently – one receiving a pre-charge warning, the other having their DNA profile obtained and possibly retained on the known person databank indefinitely.

11.116 It is apparent from the three months of data provided by Police (see [11.64] to [11.68]) that DNA was obtained for the same types of offences for which pre-charge warnings are able to be given.[111] As noted above, this is a very small sample size, so firm conclusions cannot be drawn from it and there may have been good reasons not to issue pre-charge warnings in these cases. However, we consider that having two conflicting policy goals in respect of these offences is problematic.

11.117 In addition, if the two regimes were better aligned, this would reduce disproportionate impact on Māori and better fulfil the goal of using pre-charge warnings and Alternate Action Plans to address the disparity in criminal justice outcomes for Māori.[112] The Independent Police Conduct Authority (IPCA) noted in its 2016 *Review of pre-charge warnings* that, without sufficient guidance, the pre-charge warning scheme risks differential treatment based on ethnicity.[113]

11.118 In our view, the risk of differential treatment is exacerbated in this situation where discretion first needs to be exercised between the two regimes (should the pre-charge warning regime be used or should a charge be filed in respect of which DNA could be obtained?) and then again within each regime (is this person an appropriate person to give a pre-charge warning to/from whom to seek DNA?)

Specific offences/convictions

11.119 In addition to our concerns about the general offence threshold, we have specific concerns about the offence of peeping and peering and the inadvertent exclusion of military convictions.

Peeping and peering

11.120 The offence threshold was broadened in 2009 and is referred to throughout the CIBS Act as "any imprisonable offence or offence against any of the provisions listed in Part 3 of the Schedule".[114] All but one of the offences listed in Part 3 of the Schedule are

110 Independent Police Conduct Authority *Review of pre-charge warnings* (14 September 2016) at 13–14.

111 From the three months of data provided to us by Police we have been able to determine that there were a number of offences where a person was charged under Part 2B and DNA was obtained but that are also offences for which pre-charge warnings may be given. The numbers and offences were as follows: disorderly behaviour (22); being unlawfully in an enclosed yard or building (35); cannabis charges (258) (it is not clear how many of these would have been eligible for a pre-charge warning); resisting or obstructing Police (23); trespass (31); shoplift under $500 (102); theft under $500 (53); receiving under $500 (16). We were unable to determine which of the assault charges (if any) may have been filed under the Summary Offences Act 1981.

112 Justine O'Reilly *A review of Police and iwi/Māori relationships (*New Zealand Police, October 2014).

113 Independent Police Conduct Authority *Review of pre-charge warnings* (14 September 2016) at 14.

114 Applicable to adults, children and young persons except in certain stated parts of the Act. This is discussed in more detail in Chapter 4.

imprisonable. The exception is the Summary Offences Act offence of peeping and peering.[115]

11.121 In 2002, Parliament considered and rejected a proposal to include peeping and peering as a "relevant offence" in the CIBS Act. Some members of the select committee who were considering the 2002 Amendment Bill were concerned that those convicted of peeping and peering may go on to commit more serious offences of a sexual nature. However, officials found no compelling evidence to suggest such a connection. The select committee report records:[116]

> Figures provided by the Ministry of Justice show that of those inmates who were incarcerated for committing a violent or sexual offence and were released from prison between 1995 and 1998, only a maximum of two percent had previously been convicted of peeping and peering into a dwelling house. (By contrast, 45 percent of violent offenders and 25 percent of sexual offenders in that group had a prior conviction for burglary).

11.122 We asked the Ministry of Justice for an update in relation to these figures. The Ministry advised that less than 1 per cent of the people convicted of a violent or sexual offence in 2015 had a previous conviction for peeping and peering (34 out of a total of 11,531).[117] We have not been able to find any other evidence that would support the claim that peeping and peering is a precursor to sexual offending. There seems to be no justification for overcomplicating the CIBS Act by including peeping and peering as a triggering offence when, at present, every other triggering offence is imprisonable.

Military convictions

11.123 During our review, we were approached by the New Zealand Defence Force (NZDF) concerning the ability of Police to obtain a databank compulsion notice in respect of a military conviction.

11.124 New Zealand has a military justice system that is in most respects separate from the civilian criminal justice system. The primary legislative basis for this is the Armed Forces Discipline Act 1971 and the Court Martial Act 2007. The Armed Forces Discipline Act creates both service offences (which are unique to the military) and civil offences (which are offences against the ordinary laws of New Zealand but committed by a member of the Armed Forces). Because of the definition of "conviction" in the CIBS Act, the NZDF considered that a databank compulsion notice could not be issued by Police in relation to a military conviction for a civilian offence.[118]

11.125 We are aware of at least seven offenders who this issue affects, all convicted of imprisonable civil offences in the military justice system between 2013 and 2016. Four

115 Summary Offences Act 1981, s 30. Its inclusion in Part 3 of the Schedule means that it qualifies as both a "relevant offence" (the offences that are applicable to young persons under Part 2B) and as a possible triggering offence in respect of adults, as it is included within the threshold of "any imprisonable offence or offence against any of the provisions listed in Part 3 of the Schedule". This was one of the amendments made to the Criminal Investigations (Bodily Samples) Act 1995 in 2009.

116 Criminal Investigations (Bodily Samples) Amendment Bill 2002 (221-2) (select committee report) at 8.

117 Email from Ministry of Justice to Law Commission regarding DNA data request and attaching table on the number of people convicted of violent or sexual offences in 2015 who had a previous conviction for peeping or peering (22 November 2016).

118 Section 39(1) of the Criminal Investigations (Bodily Samples) Act 1995 allows for a databank compulsion notice to be issued in respect of a person convicted of an imprisonable offence if the conviction is one to which Part 3 applies. Section 2 defines "conviction" as including a court finding that a charge is proved, an acquittal or dismissal on account of insanity and a finding that a person is unfit to stand trial. Given the inclusive nature of the definition, a conviction in the military justice system could theoretically be covered, but this is far from clear.

were convicted of drug offending, two of indecent assault and one of assault with a weapon.[119]

11.126 Currently, almost all NZDF personnel convicted of an imprisonable civil offence in the military justice system are either dismissed from the Defence Force by a court martial or discharged through an internal administrative process. These individuals therefore return to the civilian world. There seems to be no basis for distinguishing these offenders from others convicted of similar offences in the civilian justice system. This is an issue that we think should be rectified in any new legislation.

Young persons

11.127 As noted above, the Police Manual states that the triggering offence is only one factor that police officers should consider when deciding whether to obtain a sample for the known person databank. In relation to Part 2B, the Police Manual states that an additional relevant factor is whether the person is under the age of 20.[120]

11.128 The issue of whether a person's age should weigh in favour of their profile being added to the known person databank is a vexing one. In our view, this may well be a form of discrimination on the basis of age. What is much more contestable is whether it is justified.

Discrimination

11.129 We examine the right to be free from discrimination as protected by sections 5 and 19 of NZBORA at length in Chapter 13, which deals with familial searching. For an act or omission to amount to discrimination under section 19(1) of NZBORA:[121]

(a) it must create a distinction (in the sense of treating a group of people differently from a comparator group) based on a prohibited ground; and

(b) the distinction must cause a material disadvantage.

11.130 Age is a prohibited ground of discrimination under the Human Rights Act 1993, and it is defined to mean anyone 16 years old or older.[122]

11.131 We consider that the appropriate comparator groups are: first, a person aged 16 to 19 years old who Police intend to charge or who is arrested for a triggering offence and who meets one of the other criteria in the guidelines if the offence is not a relevant offence;[123] second, a person who is 20 years old or older who Police intend to charge or who is arrested for a triggering offence and who meets one of the other criteria in the guidelines if the offence is not a relevant offence.[124] Pursuant to the Police Manual anyone

119 Email from New Zealand Defence Force to Law Commission regarding numbers of civil convictions and convictions determined at court martials (20 April 2017).

120 Police Manual *DNA Sampling* at 18.

121 See discussion in Chapter 2. This test comes from the leading case on section 19 of the New Zealand Bill of Rights Act 1990: *Ministry of Health v Atkinson* [2012] NZCA 184, [2012] 3 NZLR 456 at [55].

122 Section 21(1)(i)(iii) of the Human Rights Act 1993.

123 Criminal Investigations (Bodily Samples) Act 1995, ss 2 (definition of "relevant offence"): The definition of "relevant offence" now incorporates all the offences listed in the three Parts that comprise the Schedule to the Act – which, in summary, include serious sexual and violent offences; offences punishable by seven years' imprisonment or more (as well as attempts and conspiracies); and selected offences under the Animal Welfare Act 1999, the Arms Act 1983, the Crimes Act 1961, the Land Transport Act 1998 and the Summary Offences Act 1981 (peeping and peering).

124 Criminal Investigations (Bodily Samples) Act 1995, ss 2 (definition of "relevant offence").

falling into the first group may be required to provide a sample for the Temporary Databank. This requirement would not apply to anyone in the second category.

11.132 In our view, this distinction causes a material disadvantage. This is largely because being compelled to provide a databank sample represents an ongoing intrusion on privacy and may be stigmatising. This is so regardless of whether the profile ever matches a profile on the CSD.

Justification

11.133 Again, we discuss the case law concerning section 5 of NZBORA in more detail in Chapter 13. Here it is sufficient to note that, to be "demonstrably justified", any measure limiting a right needs to be for a purpose that is sufficiently important to justify limiting the right, proportionate, rationally connected to its purpose and no more than is reasonably necessary to achieve that purpose.[125] To be "prescribed by law", the limiting measure must be governed by a law that is accessible to the public and sufficiently precise to provide appropriate guidance to those whose job it is to apply it.[126]

11.134 A justification for including age as a factor in favour of databank sampling in the Police Manual could be because 40 per cent of criminal justice apprehensions are of people aged between 15 and 24 years old, yet this group only makes up 14 per cent of the general population.[127] Therefore, as a matter of logic, obtaining more samples from young persons may assist in resolving more criminal investigations. As can also be seen from Table 5 below, a high proportion of the profiles obtained from those aged 14 to 16 years match profiles on the CSD – on average, approximately 37 per cent over the last eight years. It cannot be ascertained what the equivalent proportion is in relation to those aged 17 to 19 years, as these form a proportion of adult offending.[128]

Table 5: Profiles obtained from young persons under Part 2B

	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
Number of times a profile obtained from young person under Part 2B linked to the CSD	58	134	125	174	195	265	149	343
Percentage of profiles obtained from young persons under Part 2B that linked to the CSD	13%	18%	22%	59%	58%	47%	30%	76%

11.135 The high proportion of matches for those aged 14 to 16 years provides relatively strong justification for weighing age as a factor in favour of obtaining a sample for the known person databank, but this policy also needs to be viewed in the context of the wider youth justice system, where the focus is on reducing youth offending and promoting rehabilitation (which we discuss further in Chapter 14).

125 *Hansen v R* [2007] NZSC 7, [2007] 3 NZLR 1 at [104].

126 *New Health New Zealand Inc v South Taranaki District Council* [2016] NZCA 462, [2017] 2 NZLR 13 at [105]–[108]. This was affirmed in *New Health New Zealand Inc v South Taranaki District Council* [2018] NZSC 59 at [106]–[111].

127 *It's never too early, never too late: A discussion paper on preventing youth offending in New Zealand* (Office of the Prime Minister's Chief Science Advisor, 12 June 2018) at 11. 'Apprehension' means that a person has been dealt with by Police in some manner (e.g. a warning, prosecution, referral to youth justice family group conference) to resolve an offence: "New Zealand crime data 1975-2014" (1 April 2015) Stats NZ <http://archive.stats.govt.nz>.

128 This is slightly problematic given that the Human Rights Act defines "age" as 16 years old or older, in the context of discrimination: section 21(1)(i)(iii) of the Human Rights Act 1993.

11.136 An example of this is the Youth Crime Action Plan that Police and other agencies are responsible for delivering. The Action Plan has a particular focus on rangatahi Māori.[129] Two of the three key strategies are to reduce escalation and provide early and sustainable exits from the criminal justice system for young persons. The Action Plan notes: "The challenge for frontline workers is to make each intervention the last justice sector intervention for the young person and their family, no matter what that intervention is."[130] Yet there is a risk that obtaining databank samples may tie young persons into the justice system rather than providing them with an exit. This is particularly problematic for Māori children and young persons, whose profiles currently make up 67 per cent of the profiles from children and young persons that are held on the DPD.

11.137 It is difficult to say whether the limitation is justified overall. As we discussed with reference to the proportionality assessment required by section 21 of NZBORA, we do not know what profiles are on the CSD (and therefore what investigations may be resolved through use of the known person databank) and we do not know how useful link reports are in resolving those investigations.

11.138 Assuming the limitation is justified, we still have some concerns about the transparency of Police's policy. Section 5 requires any limitation on a right to be "prescribed by law", and while this does not require an explicit statutory provision, we question whether the Police Manual in its current form would qualify, as it is not particularly accessible to the public.[131]

The how – how do police officers decide to obtain databank samples?

11.139 The concerns we have around who should qualify for databank sampling are exacerbated by two additional problems we have identified in relation to decision-making practices:

(i) The risks associated with the broad statutory discretions in the CIBS Act, given the limited court oversight.

(ii) The appropriateness of obtaining samples by consent.

Broad discretionary powers with limited oversight

11.140 As discussed at the start of this chapter, three of the four ways of collecting profiles for the known person databank require a police officer to exercise a broad discretionary power.

(a) An officer can ask any adult to provide a sample for the DPD by consent.

(b) An officer can require any person arrested or who the police officer intends to charge with a triggering offence to provide a sample for the Temporary Databank.

(c) An officer can issue a databank compulsion notice in respect of a person who has been convicted of a triggering offence.

11.141 The last of these three discretionary powers is framed more restrictively than the others, and it only relates to convicted offenders (in relation to whom collection is less contestable).[132] Importantly, there is also an avenue to review the police officer's decision

129 Ministry of Justice *Youth Crime Action Plan 2013–2023: Report* (2013) at 3.

130 Ministry of Justice *Youth Crime Action Plan 2013–2023: Report* (2013) at 14.

131 See Chapter 13 for a discussion of what "prescribed by law" means in practice.

132 United Kingdom Human Genetics Commission *Nothing to hide, nothing to fear? Balancing individual rights and the public interest in the governance and use of the National DNA Database* (November 2009) at [2.30].

in court, albeit on limited grounds. So for the category of people who most clearly qualify for the known person databank, appropriate safeguards already seem to be in place.

11.142 By contrast, the first two powers are framed very broadly and apply to people who may not have been convicted of any offence, and there is no oversight role for the court. This raises significant issues of consistency and transparency as well as increasing the risk of unconscious bias impacting on policing decisions.

Consistency

11.143 The *Legislation Guidelines* advise that legislation should not create a power that is wider than necessary to achieve the policy objective, should identify what the powers are for and in what circumstances they may be exercised and should include safeguards to provide adequate protection of the rights of individuals affected by decisions.[133] Even in the absence of specified limits, as Philip A Joseph, the author of *Constitutional and Administrative Law in New Zealand*, notes, no discretion is absolute:[134]

> Although Parliament typically confers wide discretions when empowering public authorities, every discretionary power has legal limits [and] … a broadly framed discretion should always be exercised to promote the policy and objects of the Act… ascertained from reading the Act as a whole.

11.144 The difficulty with the CIBS Act is that it contains broad discretionary powers with few safeguards, and as we noted in Chapters 2 and 4, its overall purpose is hard to discern. Successive amendments mean it is no longer clear whether the resolution of sexual and violent offending remains a key driver.

11.145 The Police Manual contains guidance on how the discretionary powers under Parts 2B and 3 of the CIBS Act should be exercised, but as noted above, the Police Manual is not available to the general public and there is no oversight mechanism to ensure that it is complied with. As a result, there is a risk of inconsistent application.

11.146 Inconsistency could be caused by a variety of factors, including unconscious bias. The risk that these decisions could be affected in this way was raised in Parliament when the 2009 amendments were being debated. Māori Party member Te Ururoa Flavell stated:[135]

> To be upfront, the application of discretion when applied to Māori has never worked in the interests of Māori. Countless research studies have provided evidence that given the risk of police bias in over scrutiny of Māori, DNA testing will affect Māori disproportionately. The research demonstrates that systematic factors operate at one or more steps of the criminal justice process, which make it more likely for Māori people to be apprehended, arrested, charged, convicted and imprisoned.

11.147 The Court of Appeal and the Independent Police Complaints Authority have also identified the risk of unconscious racial bias impacting upon discretionary policing decisions.[136]

11.148 It is also significant that academic articles, books and public policy papers in New Zealand and internationally have recognised the potential of known person databanks to

133 Legislation Design Advisory Committee *Legislation Guidelines* (March 2018) at [18.4]–[18.6].

134 Philip A Joseph *Constitutional and Administrative Law in New Zealand* (4th ed, Brookers, Wellington, 2014) at 895.

135 (10 February 2009) 652 NZPD 1129.

136 *Kearns v R* [2017] NZCA 51, [2017] 2 NZLR 835 at [24]–[25]; and Independent Police Conduct Authority *Review of pre-charge warnings* (14 September 2016) at [76]–[84].

exacerbate any pre-existing societal issues of racial disparity.[137] The central reasoning may be summarised from a New Zealand perspective as follows. If, all else being equal, a Māori offender is more likely to be arrested and have a biological sample taken than a non-Māori offender, the databank will amplify this bias. That is because the person whose DNA profile is on the databank is automatically more likely to come to the attention of Police again in the future. Further, that person is treated as a "pre-suspect" with the associated stigma that entails.[138]

11.149 There are two ways to protect against the inconsistent application of a broad discretionary power. The first is to restrict the exercise of the power so that less discretion is involved. The second is to create a framework that allows decisions to be independently reviewed. Arguably, needing the person's consent is also a safeguard against the inappropriate exercise of a statutory power, but as we explained in Chapter 8 and discuss further below, we are not convinced that this would work in practice.

11.150 In the report assessing NZBORA consistency of the 2009 amendment to the CIBS Act, the Attorney-General stressed the need for independent oversight. He stated that the right to be protected from unreasonable search and seizure requires that, before a biological sample can be obtained from a person:[139]

> There must be a specific and sufficient basis for taking the sample from the person concerned; and
>
> Absent emergency or other special circumstances, there must be prior independent approval of the taking of the sample, most commonly by judicial warrant.

11.151 In the Attorney-General's view, neither the intended Police guidelines (regarding Part 2B) to limit the powers nor "after the fact remedies" available through the courts (such as improperly obtained DNA evidence being ruled inadmissible)[140] were a substitute for "express, external and prior" statutory safeguards.[141] The response was that Part 2B would be unworkable if judicial pre-approval was required because of the volume of arrests and because a significant portion of them occur outside of standard court hours.[142] We discuss various options associated with independent oversight below.

137 For example, Nessa Lynch and Liz Campbell (eds) *The Collection and Retention of DNA from Suspects in New Zealand* (Victoria University Press, Wellington, 2015) at 174–177; David Turner "Towards a DNA Dystopia? Human Rights Concerns under the Criminal Investigation (Bodily Samples) Act 2009" (2011) 2 NZLSJ 502; United Kingdom Human Genetics Commission *Nothing to hide, nothing to fear? Balancing individual rights and the public interest in the governance and use of the National DNA Database* (November 2009) at 51–59; Nuffield Council on Bioethics *The forensic use of bioinformation; ethical issues* (September 2007) at [3.14]–[3.16] and [4.63]–[4.66]; Brian Blakemore and Christopher Blake "Can the National DNA Database be effective and comply with human rights legislation?" (2012) 85 Police Journal 191 at 196–198; Erin E Murphy *Inside the Cell: The Dark Side of Forensic DNA* (Nation Books, New York, 2015) at ch 15 (Race and the Universal DNA Database); Sheldon Krimsky and Tania Simoncelli *Genetic Justice: DNA Databanks, Criminal Investigations and Civil Liberties* (Columbia University Press, New York, 2011) at ch 15 (Racial Disparities in DNA Data Banking); Rachel Cox "Unethical Intrusion: The Disproportionate Impact of Law Enforcement DNA Sampling on Minority Populations" (2015) 52 Am Crim L Rev 155; and Sonia M Suter "All in the Family: Privacy and DNA Familial Searching" (2010) 23 Harv J L & Tech 310 at 368–372.

138 Stigma is discussed in Chapter 14.

139 Christopher Finlayson *Report of the Attorney-General under the New Zealand Bill of Rights Act 1990 on the Criminal Investigations (Bodily Samples) Amendment Bill (2009)* (10 February 2009) at [2.2].

140 Pursuant to section 30 of the Evidence Act 2006.

141 Christopher Finlayson *Report of the Attorney-General under the New Zealand Bill of Rights Act 1990 on the Criminal Investigations (Bodily Samples) Amendment Bill (2009)* (10 February 2009) at [20].

142 Criminal Investigations (Bodily Samples) Amendment Bill 2009 (14-2) (select committee report) at 2.

Transparency

11.152 It is problematic, both for those being sampled and any lawyers who seek to assist them, that the guidance in the Police Manual is not readily available to the public. This is particularly relevant where a person is asked to provide a databank consent sample under Part 3 or required to do so under Part 2B. Without access to the guidance in the Police Manual, a person in one of those situations (or their lawyer) has little ability to know whether the police officer is acting within the lawful limits of their discretion.

11.153 It is evident that the operational guidelines in the Police Manual regarding Part 2B were developed in response to the Attorney-General's criticism that Part 2B permits the taking of databank samples without a sufficient or specific basis. The Police Manual outlines the offences and personal characteristics that may give a police officer "reasonable grounds to suspect the person has committed other offending of the type where DNA evidence would be relevant".[143]

11.154 It is, however, difficult to discern the actual basis to support all of the chosen criteria. For instance, it is unclear why fraud and failure to answer District Court bail were singled out as offences that weighed in favour of obtaining a sample, as opposed to others.[144]

11.155 To provide some additional transparency, new reporting requirements were inserted into the CIBS Act in 2009. This includes a requirement to report on the number of samples obtained under Part 2B each year, broken down by age (adult or young persons) and ethnicity. We have discussed that data in this chapter. It is helpful, but given that the triggering offences are not included, it is still difficult to see how police discretion is being applied in practice.

Databank consent samples

11.156 The broad discretionary power to obtain databank consent samples under Part 3 raises a separate set of issues. Many of these were identified and discussed when the original Criminal Investigations (Blood Samples) Bill was introduced into Parliament in 1994. During the Bill's passage, the (then) Justice Minister Doug Graham asserted the value to Police and the community of adding profiles by consent of people (other than those convicted of relevant offences). He stated that databank requests would not apply to persons under 17 years (as this was felt to be wrong in principle)[145] and that there would be the same kind of procedural protections associated with suspect sampling by consent.[146] The important thing, he said, was that "consent is genuinely given and understood".[147]

11.157 However, at the time the (then) Privacy Commissioner, amongst others, opposed giving police officers a discretion to obtain databank consent samples. He stated that the databank would end up having a much wider scope than was necessary to meet its law enforcement objectives.[148]

143 Police Manual *DNA Sampling* at 18.

144 See [11.30] to [11.35] for discussion of the Part 2B operational guidelines as set out in the Police Manual.

145 (29 November 1994) 545 NZPD 5192.

146 (29 November 1994) 545 NZPD 5192.

147 (9 August 1995) 549 NZPD 8564.

148 Office of the Privacy Commissioner *Report by the Privacy Commissioner to the Minister of Justice on the Criminal Investigations (Blood Samples) Bill* (20 February 1995) at [4.3].

> By granting the power to add samples by consent the reasonable databank proposal could, without any legal impediment, become a wide-scale population genetic databank over the years.

11.158 Then Opposition member Phil Goff noted his concern that anyone's profile could be held on what was being "sold" as an offenders' databank, provided they gave consent. He questioned why "the profiles of the innocent" should be mixed on the databank with "the guilty" but, more importantly, why they should be obtained at all.[149] He put forward an amendment to limit the databank to profiles of those convicted of an offence punishable by imprisonment, but this did not succeed.

11.159 As we noted in Chapter 8, we have doubts as to whether any biological sampling by Police should be conducted by consent any longer. We gave several reasons: the inherent power imbalance; the complexity of the information that needs to be conveyed; and the current inaccessibility of legal advice. Arguably, there is less of a coercive element to a police officer asking a person to provide a databank consent sample by consent. However, newspaper articles have claimed that individuals have been asked to provide a databank consent sample in return for a police officer exercising their discretion not to prosecute minor offending.[150]

11.160 A benefit of databank consent samples is that there may be possibilities for application of tikanga health frameworks, as if someone refuses to provide a sample, that is the end of the matter. However, as we also discuss in Chapter 8, the fact that individuals may have little or no choice in providing their DNA to Police highlights the difficulties with taking concepts developed in the health sector and applying them in the criminal justice system.

11.161 Arguably another benefit of databank consent samples (when compared to suspect samples) is that a person can, at any time, withdraw their consent to their profile being retained on the known person databank.[151] However, this hardly ever occurs. Police does not report on this but has provided additional data showing that, in the reporting years 2010–2011 to 2013–2014, it received between 15 and 45 requests for removal.[152]

11.162 There is a clear benefit for suspects who provide a suspect sample, but this is not the case for those who provide databank consent samples. When a suspect provides a sample by consent, it may clear them of any wrongdoing. The same cannot be said of a databank consent sample. One potential benefit is that the person may be quickly ruled out of future investigations if their profile does not match to the CSD. However, for this to eventuate, the investigating officers need to know that the person's profile is on the known person databank. The information may only come to light at a later date. This means that, depending on Police knowledge and practices, the databank may have

149 (9 August 1995) 549 NZPD 8569.

150 "Police pressured clients into giving DNA – lawyer" *The New Zealand Herald* (online ed, Auckland, 22 June 2010). This article reported police officers in South Auckland seeking DNA samples from three people in return for not breaching their bail. Two days after this, it was reported that the previous day a 24-year-old Pacific Island woman from Auckland, driving without a licence, was stopped by Police and taken to a police station: Derek Chang "Police face new claims of intimidation over DNA" *The New Zealand Herald* (online ed, Auckland, 24 June 2010). The affected woman said:

> An officer wanted me to give a DNA sample. I told him I didn't want to do it, but he told me if I wanted to go home quickly, then I would have to give the DNA.

151 The purpose of providing a databank consent sample is so that a profile can be generated and added to the DPD. When someone withdraws their consent, this does not necessarily mean that the person's profile will be removed from the DPD. For instance, if a person has been convicted of an offence between the time of consenting and withdrawing consent, the profile will not be removed. See sections 36–38.

152 This data was provided by Police: 45 requests for removal in 2010–2011; 39 requests for removal in 2011–2012; 25 requests for removal in 2012–2013; 18 requests for removal in 2013–2014.

limited utility in eliminating people from further police inquiries. By contrast, the main aim of the known person databank is to obtain link reports that assist in identifying and prosecuting offenders, so the chances of the known person databank ultimately being used to the person's detriment are much higher.

11.163 Given our concerns regarding biological sampling by consent and the fact that very few databank consent samples are now obtained, we question whether this method of collection is still necessary.

The when – when is it appropriate to obtain samples upon arrest/intention to charge?

Justification for obtaining profiles pre-conviction

11.164 The final issue regarding the collection of profiles for the known person databank relates to timing. Is it appropriate to obtain these profiles upon arrest/intention to charge?

11.165 As noted by the Human Genetics Commission in the United Kingdom, the collection of DNA profiles from convicted offenders for the known person databank is usually considered unproblematic: "their conviction is accepted as justifying a greater level of interference with their privacy rights".[153] However, obtaining profiles upon arrest/intention to charge from those who have not been convicted of an offence and comparing those profiles to the CSD is more troubling, particularly if there is no court oversight and the samples are obtained by compulsion, as they currently are under Part 2B.

11.166 The Human Genetics Commission examined possible arguments for holding the profiles of unconvicted people and concluded there may be a justification if based on "some robust estimation of the value of holding [these profiles] in preventing future crimes or leading to the conviction of offenders".[154] However, as the Commission points out:[155]

> This approach requires the acceptance that *some* interference with the privacy of *some* people who will not fall into the class of convicted offenders is necessary for public protection.

11.167 The European Court of Human Rights also expressed concerns about retaining a person's profile on the known person databank when they have not been convicted of an offence. The Court's position on this point has been summarised as follows:[156]

> Essentially, the court seemed to have some sympathy for the view that while non-conviction DNA retention is not, strictly speaking, a declaration of guilt, and nor does it constitute an expression of suspicion following acquittal, it denotes a degree of distrust on the part of state agents as to the future criminality of the person and her likelihood of re-offending, and thus seems to relate to the presumption of innocence loosely speaking.

11.168 In New Zealand, the most important point to make in this regard is that the guidance in the Police Manual indicates that, even when using their collection powers under Part 2B or in collecting databank consent samples under Part 3, police officers should primarily be targeting convicted offenders.

153 United Kingdom Human Genetics Commission *Nothing to hide, nothing to fear? Balancing individual rights and the public interest in the governance and use of the National DNA Database* (November 2009) at [2.30].

154 At [2.34].

155 At [2.35].

156 Liz Campbell "Criminal Labels, the European Convention on Human Rights and the Presumption of Innocence" (2013) 76 Modern Law Rev 681 at 687 summarising *S and Marper v UK* (2009) 48 EHRR 50 (Grand Chamber, ECHR) at [122].

11.169 In relation to databank consent samples under Part 3, the Police Manual lists five relevant factors that an officer should consider. The first three relate to the person's previous convictions.[157] Similarly, in relation to Part 2B, the Police Manual indicates that officers should only obtain a sample from a person with no previous conviction if that person is arrested (or there is an intent to charge the person) for a serious violent offence, a sexual crime, a firearms offence, burglary or a Class A drugs offence. In all other instances, the guidelines suggest that the person's previous convictions should be a highly relevant factor.

11.170 The centrality of previous convictions in the Police Manual raises the question: Why are police officers not using databank compulsion notices to obtain DNA profiles from these people if they have prior convictions for triggering offences? The answer is probably because the CIBS Act puts a time limit on obtaining profiles for the known person databank in relation to a conviction. It must occur within six months of the conviction being entered or before the person is released from prison, whichever is later.[158] The practical reality is that Police may miss this window, often because of difficulties in locating convicted offenders.

11.171 This highlights one of the practical benefits to Police of databank sampling under Part 2B. From an efficiency perspective, there are benefits in obtaining biological samples for the databank upon arrest/intent to charge. It is the only time when a person being prosecuted will certainly be in custody (outside of the courtroom).[159]

11.172 Another suggested efficiency gain is that obtaining a databank sample upon arrest/intent to charge also enables Police to use the CSD to check whether the person has committed related offending. Any link report can be followed up by the investigating officers, and that may result in extra charges being laid against the person. If so, those charges can all be dealt with at the same time by the court. However, we have not been able to ascertain how often this actually occurs. Further, as we explain below, there may be other ways of achieving the efficiency gains.

OPTIONS FOR GENERAL REFORM

11.173 The inter-related issues that we have identified have no one obvious solution. There is a need to find a compromise that appropriately addresses the various tensions. Furthermore, additional evidence as to the effectiveness of the DNA profile databanks is needed to make the requisite judgement calls that Parliament will need to make in any legislative reform. The known person databank undoubtedly assists Police to resolve criminal investigations, but aside from the high-profile successes, we do not currently know which ones and we do not know how often. We also do not know whether and how often the databank is used to eliminate persons of interest and exonerate convicted offenders.

157 The fourth reminds officers that dual sampling should be considered when asking for a consensual suspect sample. This last factor alerts officers to the fact that Part 2B sampling may be an option. This means that only the last two factors could result in a person's profile being collected for the known person databank when they have no previous convictions.

158 Criminal Investigations (Bodily Samples) Act 1995, s 41(2)(e).

159 That is because a person is in Police custody at the time of their arrest, whereas once a charge is filed and proceedings begun, from that point onwards, the person will not be in custody (unless the person is detained on remand in prison pending trial). Further, if they are convicted and discharged, fined or receive a community-based sentence, they will not return to custody.

11.174 Nonetheless, it is possible to identify and assess a variety of broad options at this stage. First, we look at whether the option of a universal databank could be justified. We then examine options as to how differing groups of individuals could be dealt with: convicted offenders, suspects (where there is a crime scene sample), suspects (where there is no crime scene sample) and others.

Independent oversight

11.175 Independent oversight, along with raising the threshold for inclusion on the databank and ensuring discretion is tightly constrained or absent, would go some way towards addressing the current issues with the databank. An important feature of any reform options will be the provision of independent oversight with a central role for Māori. That is because Māori are currently disproportionately represented on the databank and in other criminal justice statistics and are more likely to be adversely affected by use of discretionary powers and the collection and retention of biological samples and DNA profiles. The Treaty of Waitangi principles of active protection, equity, rangatiratanga and partnership indicate that Māori should have an active role in governance decisions about the databank. Oversight is discussed in Chapter 15.

THE OPTION OF A UNIVERSAL DATABANK

The pros – arguments in support

11.176 Establishing a universal databank would address the risks inherent in broad discretionary powers and would negate the need to use controversial forensic analysis techniques such as forensic DNA phenotyping,[160] mass screening,[161] indirect suspect sampling[162] and familial searching.[163] Under this option, such a databank would be a "whole population" forensic databank containing the DNA profiles of everyone in New Zealand.

11.177 Some commentators see this as a potential solution that would counter any bias and disproportionality in DNA profiling practices.[164] It could also address the issue of stigmatisation that we discuss in Chapter 14.[165] Proponents also argue that it would generate more investigative leads, result in more convictions, eliminate innocent parties from investigations more efficiently, facilitate more post-conviction exonerations and act as more of a deterrent to criminal offenders.[166] In the United States, it has been observed

160 Discussed in Chapter 6.

161 Discussed in Chapter 8.

162 Discussed in Chapter 9.

163 Discussed in Chapter 13.

164 See D Kaye and M Smith "DNA Databases for Law Enforcement: The Coverage Question and the Case for a Population-Wide Database" in D Lazer (ed) *DNA and the criminal justice system: The Technology of Justice* (MIT Press, Cambridge (Mass), 2004) 225 mentioned in Liz Campbell "A rights-based analysis of DNA retention: 'non-conviction' databases and the liberal state" (2010) 12 Crim LR 889 at 904; Law Reform Commission of Ireland *Consultation Paper on the Establishment of a DNA Database* (LRC CP 29, 2004) at 155 citing David Kaye and Edward Imwinkelried *Forensic DNA Typing: Selected Legal Issues – A Report to the Working Group on Legal Issues, National Commission on the Future of DNA Evidence* (2 February 2000) at 29; David Kaye and Michael Smith "DNA Identification Databases: Legality, Legitimacy and the Case for Population-Wide Coverage" (2003) Wis L Rev 413 at 437–452.

165 See also Joe Purhouse "Article 8 and the retention of non-conviction DNA and fingerprint data in England and Wales" (2017) 4 Crim L R 253 at 262–263; and Liz Campbell "A Rights-based Analysis of DNA Retention: 'non-conviction' databases and the liberal state" (2010) 12 Crim L R 889.

166 David Kaye and Michael Smith "DNA Identification Databases: Legality, Legitimacy and the Case for Population-Wide Coverage" (2003) Wis L Rev 413 at 438–440 and 451–452.

that a large proportion of serious offences are committed by people who do not already have a conviction for other offending.[167] Only a universal databank could be used to identify these offenders at the very start of their potential criminal careers.

11.178 Some commentators have also argued that a universal databank is inevitable and that it would be better to create one by design rather than simply waiting for current databanks to expand until they are, in effect, universal.[168] In designing such a databank, strict privacy and security controls could be put in place to protect against inappropriate use. Some proponents also argue that appropriate uses would not necessarily need to be limited to the criminal sphere and could include assisting to identify missing persons and disaster victims.[169] Potentially beneficial academic research could be conducted using a universal databank as well.[170]

11.179 The strongest argument in favour of a universal databank is that it would counter existing discrimination. On this point, Sir Stephen Sedley, formerly a Judge of the Court of Appeal of England and Wales, has stated:[171]

> It means where there is ethnic profiling going on, a disproportionate number of ethnic minorities get onto the database. It also means that a great many people who are walking the streets and whose DNA would show them to be guilty of crimes, go free. Going forwards [that is, establishing a universal databank] has very serious but manageable implications … it means that everybody, guilty or innocent, should expect their DNA to be on file for the absolutely rigorously restricted purpose of crime detection and prevention.

The cons – arguments against

11.180 Those opposed to a universal databank suggest that such a databank may give the impression of being fairer but would simply mask existing bias. They argue:[172]

> If the lens of the criminal justice system is focused almost entirely on one part of the population for a certain kind of activity (drug-related, street crime), and ignores a parallel kind of crime (fraternity cocaine sales a few miles away), then even if the fraternity members' DNA samples are in the databank, they will not be subject to the same level of matching, or of subsequent allele frequency profiling research to "help explain" their behavior. Thus, it is unrealistic to expect that a "neutral" database policy, layered over an unequal criminal justice system, will eliminate the systemic bias.

11.181 Opponents also suggest that creating a system that potentially breaches the rights of a large number of people because the current system already breaches the rights of a smaller number of people is not a solution. It does nothing to placate the concerns of the

167 David Kaye and Michael Smith "DNA Identification Databases: Legality, Legitimacy and the Case for Population-Wide Coverage" (2003) Wis L Rev 413 at 451.

168 Debra Wilson *Genetics, Crime and Justice* (Edward Elgar Publishing (UK), Cheltenham, 2015) at 68; and Erin Murphy "DNA in the Criminal Justice System: A Congressional Research Service Report* (*From the Future)" (2016) 64 UCLA L Rev Disc 340 at 369. This argument is identified and countered in Sheldon Krimsky and Tania Simoncelli *Genetic Justice: DNA Databanks, Criminal Investigations and Civil Liberties* (Columbia University Press, New York, 2011) at 160.

169 David Kaye and Michael Smith "DNA Identification Databases: Legality, Legitimacy and the Case for Population-Wide Coverage" (2003) Wis L Rev 413 at 439.

170 For a discussion of academic research on the known person databank and the associated risks, see Chapter 12.

171 Interview with Sir Stephen Sedley, (Danny Shaw, BBC Radio 4 Interview, 5 September 2007).

172 Troy Duster "Behaviour Genetics and Explanations of the Link Between Crime, Violence, and Race" in E Parens, A R Chapman and N Press (eds) *Wrestling with Behavioral Genetics: Science, Ethics and Public Conversation* (John Hopkins University Press, Baltimore, 2006) 150 at 168 cited in Mark A Rothstein and Meghan K Talbott "The Expanding Use of DNA in Law Enforcement: What Role for Privacy?" (2006) 34 Journal of Law, Medicine & Ethics 153 at 155.

smaller group. This is tied to wider concerns around the overall constitutionality of universal databanks.[173]

11.182 As explained above, the principle of proportionality that underpins section 21 of NZBORA (and equivalent human rights protections overseas) does not support the establishment of a universal databank. This principle was central to the Irish Law Commission's decision not to recommend the option of a universal databank in 2005.[174] It described the option as "a disproportionate interference with the rights of innocent individuals".[175] Other commentators have gone further and argued that such a databank would represent a "fundamental", "significant" or "seismic" shift away from liberal democratic principles, particularly the principle of limited State intervention.[176] It would, in effect, involve the State treating all individuals as potential offenders rather than as citizens of good will and benign intent.[177]

11.183 The difficulty is that any significantly expanded privacy intrusion would need to be justified by extensive law enforcement benefits. As explained above, there is no empirical data to support the conclusion that such benefits would eventuate. The best current estimate is that crime scene samples are only collected in between 0.5 per cent and 2 per cent of investigations, so a larger known person databank would bring negligible benefits in terms of improved public safety. There is limited evidence to support the conclusion that a universal databank would have a deterrent effect.[178]

11.184 There may arguably be benefits of a universal databank to minority groups, including Māori, because a universal databank would alleviate other disproportionate impacts of the known person databank, such as disproportionate representation, the impacts of familial searching and ethnic inferencing. However, if Police unconscious bias continues to impact on use of discretion in policing, a universal databank could enable more efficient policing of groups already disproportionately impacted by policing decisions.

11.185 Regarding the argument that it would facilitate elimination of people from investigations (either as pre-trial exculpations or post-conviction exonerations) the less intrusive

173 Sheldon Krimsky and Tania Simoncelli *Genetic Justice: DNA Databanks, Criminal Investigations and Civil Liberties* (Columbia University Press, New York, 2011).

174 Law Reform Commission of Ireland *The Establishment of a DNA Database* (LRC 78-2005, November 2005) at [1.18].

175 At [1.18].

176 Liz Campbell "A rights based analysis of DNA retention" (2010) 12 Crim L R 889 at 905; "The Forensic Use of Bio-Information Ethical Issues" at [4.60ish] and "Article 8 and Retention of Non-Conviction DNA and Fingerprint Data in England and Wales" at 7"Use of Genetics in Criminal Investigations" at 69.

177 Nuffield Council on Bioethics *The forensic use of bioinformation: ethical issues* (September 2007) at [4.76].

178 Arguments based purely on deterrence theory have well known limitations: for instance, a criminal's DNA may be entered at the end of their "criminal career", and offenders often have impulsive natures and not weigh up the costs of committing crime: Nessa Lynch and Liz Campbell "'To Have and To Have Not': The Retention of DNA for Criminal Justice Purposes in New Zealand" (2016) 2 NZ L Rev 319 at 328-329. An interview with volunteer prisoners revealed that, while they believed DNA forensics was effective, it did not deter them from committing a crime: Carlos Jordi "Diminished Returns: The Exorbitance of Collecting DNA from all Arrestees" (2014) 26 St Thomas L Rev 346 at 368. On a more general level, statistical analysis of the Danish Central DNA Database found that expanding the database led to some deterrence of future criminal activity, especially among first-time offenders, but also led to a higher likelihood of offenders being detected. The deterrence effect of the database could be upwardly biased if not separated from the detection effect: Anne Anker, Jennifer Doleac and Rasmus Landerso "The effects of DNA databases on the deterrence and detection of offenders" (December 2017, unpublished) at 32–33. The authors added that "we currently know very little about precisely how much deterrence we achieve for any given increase in the likelihood that an offender is apprehended": at 3.

approach would be for those seeking elimination to provide a biological sample for DNA profiling.[179]

11.186 Furthermore, the sheer size of a universal databank would increase the chances of a false positive or adventitious match – put simply, a match to the wrong person.[180] This is explained by the Forensic Genetics Policy Initiative:[181]

> The likelihood of errors increases the larger the database is, because more samples are being analysed and more computer searches are being conducted. The expected number of false matches that will occur by chance ("adventitious matches"), assuming there are no errors or mix-ups at the crime scene or the lab, is given by the probability of a false match (i.e. a match with a DNA profile from the wrong person) times the total number of comparisons made between DNA profiles.

11.187 As we explain further in Chapter 14, such matches could lead investigations astray and even result in miscarriages of justice.

11.188 In addition to constitutional concerns, there are substantial practical difficulties associated with establishing, maintaining and safeguarding a universal databank. These difficulties are acknowledged by commentators on both sides of the debate.

11.189 First, establishment of such a databank requires the collection of samples from an entire population. Some commentators have theorised that the newborn blood spot cards could be used as a starting point, although this could be very expensive.[182] However, as explained in Chapter 9, that could undermine the metabolic screening programme. Alternatively, babies could be sampled at birth specifically for the universal databank, but that would potentially place healthcare workers in breach of their own professional ethics and would involve the State retaining DNA profiles for 10 years before they could even potentially be useful (this is the age at which children in New Zealand first become criminally liable).[183] Others have suggested that samples could be obtained when applying for a passport or driver licence.[184] However, not all New Zealanders will make such an application, and this does not address the issue of migrants and visitors. Compliance

179 Sheldon Krimsky and Tania Simoncelli *Genetic Justice: DNA Databanks, Criminal Investigations and Civil Liberties* (Columbia University Press, New York, 2011) at 149–151. The authors do acknowledge that there have been examples in the United States where individuals have provided a DNA profile proving they were not present at a crime, yet they ended up wrongfully convicted or were not exonerated post-conviction. The authors accept that a universal databank may have helped in such situations, as the real offender could have been identified. However, they argue that having a universal databank would not address the deep class and racial biases in the criminal justice system that resulted in those individuals being convicted in the first place.

180 As noted in Chapter 3, by "adventitious match" or "false positive", we mean that, purely by chance, the STRs in both profiles (the crime scene profile and the DNA profile of the known person) are the same at each locus tested – yet the crime scene profile did not come from the known person but from a different person. This is possible within a large population group. As the number of loci tested has increased, the risk of adventitious matches has reduced. However, if a crime scene profile is degraded or partial, this increases the chance of an adventitious match.

181 Forensic Genetics Policy Initiative *Establishing Best Practice for Forensic DNA Databases* (September 2017) at 22; and Debra Wilson *Genetics, Crime and Justice* (Edward Elgar Publishing, Cheltenham (UK), 2015) at 66–67.

182 Nuffield Council on Bioethics *The forensic use of bioinformation: ethical issues* (September 2007) at [4.75]; and Sheldon Krimsky and Tania Simoncelli *Genetic Justice: DNA Data Banks, Criminal Investigations, and Civil Liberties* (Columbia University Press, New York, 2011) at 160.

183 Children can only be prosecuted for murder and manslaughter at the age of 10: Oranga Tamariki Act 1989, s 272(1); Crimes Act 1961, s 21. United Kingdom Human Genetics Commission *Nothing to hide, nothing to fear? Balancing individual rights and the public interest in the governance and use of the National DNA Database* (November 2009) at [3.43].

184 Sarah Lipscombe "Challenging Privacy: Using the National DNA Database to Support Victims of Sexed Violence" (MA (by research) thesis, University of Central Lancashire, 2009) at 57.

would also be a problem.[185] Those who envisage that they may commit a criminal offence would take steps to avoid population-wide sampling. Also, many people may refuse to consent. Would samples be taken from such people by force? Finally, even if a collection process could be agreed upon, it would come at a huge and continuing financial cost.

11.190 Second, a universal databank itself would be costly to maintain and secure. It would be hugely vulnerable to infiltration, abuse and human error.[186] There would also be increased dangers from 'function creep', given that a whole population database would be a much more attractive resource to a wide variety of organisations, agencies and corporations.[187] As summarised by the Privacy Commissioner in 2009:[188]

> It is imperative that a databank of DNA information about criminals should not become, by a process of function creep, a databank of the general population. Such a process, were it to occur, would run a serious risk of eroding public trust and confidence in the Police, the Government and the justice system.

11.191 We are not aware of any other jurisdiction that has such a universal databank. Kuwait passed a law in 2015 establishing a universal databank, but Kuwait's Constitutional Court ruled in 2017 that the law violated the constitution's guarantee of personal liberty.[189] In 2005, Portugal's incoming government proposed a universal databank, but due to public objections, the databank was limited to criminal offenders.[190]

11.192 Our view is that this issue needs public debate. In saying that, we note that the option of a universal databank raises significant concerns around all three of the main objectives for our review: constitutionality; being fit for purpose (in the sense of being cost-effective) and accessibility (as a universal databank would require a detailed and complex legal framework to address the practical issues discussed above).

OPTIONS FOR DEALING WITH DIFFERENT TYPES OF OFFENDERS

Convicted offenders

11.193 We now turn to consider other options for different groups. The first is that of convicted offenders.

11.194 As noted throughout this chapter, there is a strong case to be made for collecting samples for the known person databank from convicted offenders. This has been accepted in New Zealand and in most places around the world for decades. The questions in relation to this group are: for which offences, and how?

185 United Kingdom Human Genetics Commission *Nothing to hide, nothing to fear? Balancing individual rights and the public interest in the governance and use of the National DNA Database* (November 2009) at [3.44].

186 Sarah Lipscombe "Challenging Privacy: Using the National DNA Database to Support Victims of Sexual Violence" (MA (by research) thesis, University of Central Lancashire, 2009) at 57–58.

187 Nuffield Council on Bioethics *The forensic use of bioinformation: ethical issues* (September 2007) at [6.19]–[6.21]; and United Kingdom Human Genetics Commission *Nothing to hide, nothing to fear? Balancing individual rights and the public interest in the governance and use of the National DNA Database* (November 2009) at 80–88.

188 Privacy Commissioner "Submission to the Justice and Electoral Committee on the Criminal Investigations (Bodily Samples) Amendment Bill 2009" at [2.4].

189 Andy Coghlan "Kuwait's plans for mandatory DNA database have been cancelled" *New Scientist Magazine* (online ed, 9 October 2017).

190 Lutz Roewer "DNA fingerprinting in forensics: past, present, future" (2013) 4 Investigative Genetics 1 at 7.

Which offences?

11.195 In terms of the seriousness threshold, we note that there are arguments in favour of various cut-off lines. A threshold based on the maximum penalty that is available in respect of an offence is somewhat arbitrary, and further, the maximum penalty alone does not provide much of an indication of individual criminality. On the other hand, it is easy to understand and apply.

11.196 If a threshold based on maximum penalties were chosen, logical options would include any offence that is punishable by:

(a) any term of imprisonment (the status quo in New Zealand and the approach taken in the United Kingdom[191] and the United States[192]); or

(b) six months imprisonment or more (to ensure no overlap with the offences eligible under the pre-charge warning regime); or

(c) 12 months' imprisonment or more (the approach taken in the Australian Capital Territory[193] and Western Australia[194]); or

(d) two years' imprisonment or more (to align with the threshold for being eligible for a jury trial);[195] or

(e) five years' imprisonment (the approach taken in Canada[196] and Ireland[197]).

11.197 An alternative would be to include a list of qualifying offences in legislation, as the CIBS Act did prior to 2009. This is a more nuanced approach that could be tailored to focus specifically on offences where DNA may be found at the crime scene, but given the ability to analyse even more miniscule amounts of DNA (trace DNA),[198] DNA could now be relevant to almost any type of investigation. Furthermore, listing offences is not a particularly accessible approach.

11.198 A third alternative would be to obtain DNA profiles only from those sentenced to a term of imprisonment. The benefit of this option is that the sentencing process is an individualised assessment of criminality and the decision to impose imprisonment inherently reflects a concern about the person's risk of reoffending.[199] There is also an efficiency gain with this approach as databank samples could be obtained from offenders as they entered the prison (if their profiles were not already on the databank). Taking samples from everyone sentenced to imprisonment would also promote consistency. The downside of this option is that it may be considered too restrictive. The pool of individuals on the known person databank may not be big enough to make the most effective use of the system. However, this option does not mitigate the impact of unconscious racial bias of policing decisions at the outset.

191 See Police and Criminal Evidence Act 1984 (UK), s 63; and The National Police Records (Recordable Offences) Regulations 2000 (UK), s 3.

192 DNA Identification Act, 34 USC §12592(a)(1).

193 Crimes (Forensic Procedures) Act 2000 (ACT), s 9(1).

194 Criminal Investigation (Identifying People) Act 2002 (WA), s 3(1) definition of "serious offence".

195 See Criminal Procedure Act 2011, ss 4(1) and 73–74.

196 Criminal Code RSC 1985 c C-46, s 487.04 definition of "secondary designated offence".

197 Criminal Justice (Forensic Evidence and DNA Database System) Act 2014 (Ireland), s 9(1)(b).

198 Discussed in Chapter 7.

199 The judge could even impose an appropriate retention period at the time of sentencing. This is an option we discuss in relation to retention in Chapter 14.

11.199 Whichever approach is preferred, we consider that there are two matters that should be included:

(a) Military convictions should qualify if there is a civilian equivalent.

(b) The offence of peeping and peering should not qualify (unless in the future the maximum penalty were increased from a fine to imprisonment).

How to obtain samples from convicted offenders?

11.200 If the seriousness threshold is not based on the imposition of a prison sentence, the question of how to obtain samples from convicted persons needs to be addressed.

11.201 As explained above, it seems as though Part 2B and obtaining databank consent samples under Part 3 are both being used for this purpose, despite the databank compulsion notice regime. This is not a particularly transparent approach, but the six month time limit for issuing databank compulsion notices may be forcing Police's hand. That time limit probably reflects historical concerns about the prospect of the physically intrusive DNA sampling process weighing on a convicted person's mind. That is not so troubling any more given that most samples are now obtained through mouth swabbing. There does need to be some time limit though to prevent databank profiles being obtained in relation to stale offending. Potentially if the six-month time limit were adjusted to, for example, two or five years, Police would be able to collect profiles from convicted offenders in a more transparent way.

11.202 Another option, which would allow for efficient collection of DNA profiles from convicted persons, would be to allow a databank sample to be obtained upon arrest/intent to charge for a triggering offence but not permit the sample to be analysed or uploaded to the known person databank until a person was convicted.[200] Alternatively (if there were concern about holding the sample for this length of time), the sample could be analysed immediately and a profile generated but no further action permitted unless or until a conviction was entered.[201] This would also inevitably involve the collection of samples from people who did not ultimately receive a conviction as well. However, given that (in effect) this option is the equivalent of Part 2B of the CIBS Act (but with the Temporary Databank being quarantined pending conviction), this risk may not be considered too concerning.

11.203 As is currently the case under Part 2B, this option would probably still require the exercise of discretion, but the statutory power could set out relevant considerations (with age potentially being a neutral factor) and the court could be required to approve uploading the profile to the known person databank at the time of conviction. A variation would be for an oversight body to audit/monitor the exercise of this discretion to ensure consistency.

11.204 This option is squarely based on the idea that the physical intrusion involved in DNA sampling is low, while the informational privacy intrusion is high. If this premise is not accepted, this option may not be considered appropriate.

200 The sample could be securely held by ESR pending the outcome of any court proceedings concerning the triggering offence.

201 A profile would be held on an individual's case file as is currently the case with profiles generated from samples obtained under Part 2.

Suspects where there is a crime scene sample

11.205 In both New Zealand (through dual requests) and Australia, there appears to be a second group of people who are also regularly targeted for databank sampling. This group consists of those who are being asked to provide suspect samples in relation to a specific case. The rationale for obtaining databank samples from this group of people is that a databank comparison may reveal related offending that could be prosecuted alongside the original triggering offence. The supporting logic is that a person who has committed an offence where DNA evidence is relevant (for example, burglary) may well have committed another similar offence.

11.206 If it were considered appropriate to continue to obtain dual samples from suspects in New Zealand, this could be dealt with by opting for a database system with a suspect index, similar to that found in most Australian jurisdictions. The general approach there is that any profile that is on a suspect index may be compared to the crime scene index prior to conviction. It may then be transferred to the offender index if the person is convicted.

How to obtain suspect samples where there is a crime scene sample

11.207 In terms of how the profile is obtained, this may depend on the preferred option for general suspect sampling. We discussed these options in Chapter 8, where we put forward the option of consent but did not favour it (for similar reasons to those discussed in this chapter in respect of databank consent samples). We also proposed introducing a requirement that all samples be obtained by court order or through a contestable suspect compulsion notice regime. If either of these options were adopted, the order or notice could also state that the sample could be used for databank purposes as well if specified criteria were met. A benefit of both options would be court oversight, which we consider to be highly desirable for pre-conviction databank sampling.

11.208 In terms of the triggering offence, we envisage (as now) the same threshold as that which applies for obtaining samples from convicted persons.[202] For completeness, we also note that the same offence threshold would probably be appropriate for the remaining options discussed in this chapter as well.

Suspects where there is no crime scene sample and others

11.209 In addition to convicted persons and suspects where there is a crime scene sample, there is a third group of people for whom databank sampling may well be justified. This group consists of suspects who are repeat offenders and for whom suspect sampling and the databank compulsion notice regime are not available.

11.210 An example of such a person would be a suspected prolific burglar. This person may be thought to be responsible for a series of burglaries but may not have any sufficiently recent previous convictions to enable an officer to issue a databank compulsion notice. In addition, the person may have been arrested at the scene of an offence, in relation to which no crime scene sample is available, and therefore suspect sampling would not be

[202] In Chapter 8, we suggested that a lower threshold for suspect sampling could be justified on the basis that there is a specific offence under investigation where DNA is relevant. This justification would not extend to dual sampling, given that databank sampling is inherently speculative.

an option either. For this type of scenario, there may need to be a third method of collecting a databank sample.

11.211 One option would be to empower the officer to obtain a databank sample upon arrest/intent to charge for a triggering offence and then to apply to the court for an order allowing a profile to be generated and uploaded to the known person databank prior to conviction (for either a one-off check or to be retained until trial). The application would need to explain the case-specific justification as to why the databank comparison could not wait until the original charge against the person had been determined. This would turn on a police officer convincing a judge that the likelihood of discovering additional offending would justify the intrusion.

11.212 The logical alternatives to this option would be to retain some variation of the current Part 2B and/or databank consent samples under Part 3. These could be improved to provide clearer statutory criteria explaining how police officers should exercise these discretionary powers. The court could also be given a role in reviewing any decision to require a sample for a Temporary Databank. These options would be a variation on the status quo and (but for the court oversight) would align with the approach taken in the United Kingdom. Notably, however, the United Kingdom has the most expansive DNA profile regime in the Western world.

Summary of the options

11.213 Table 6 summarises the above options. The additional factor to bear in mind, in relation to convicted people and suspects, is the offence threshold. This could be based on a list of qualifying offences or on a seriousness threshold based on the maximum penalty as explained at [11.195] to [11.199].

Table 6: Collection for the known person databank: who and how?

	CONVICTED OFFENDERS SENTENCED TO A TERM OF IMPRISONMENT	CONVICTED OFFENDERS NOT SENTENCED TO A TERM OF IMPRISONMENT	SUSPECTS (WHERE THERE IS A CRIME SCENE SAMPLE IN THE CASE)	SUSPECTED OFFENDER (WHERE THERE IS NO CRIME SCENE SAMPLE IN THE CASE)	OTHER PERSONS DETERMINED BY POLICE
Samples obtained upon entry to prison.	✓	×	×	×	×
Samples obtained pursuant to a databank compulsion notice within five years of a conviction being entered.	✓	✓	×	×	×
Sample obtained upon arrest/intent to charge but profile only uploaded after a conviction is entered.	✓	✓	×	×	×
Sample obtained upon arrest/intent to charge for the purpose of casework (by compulsion) and the profile uploaded to the known person databank straight away. The profile could be retained upon conviction.	✓ (not all)	✓ (not all)	✓	×	×
Sample obtained upon arrest/intent to charge and uploaded to the known person databank straight away. The profile could be retained upon conviction.	✓	✓	✓	✓	×

Sample obtained upon arrest/intent to charge and only uploaded to the databank straight away if that is permitted by a court order. The profile could be retained upon conviction.	✓ (not all)	✓ (not all)	✓ (not all)	✓ (not all)	✗
Sample obtained by consent.	✓ (not all)	✓ (not all)	✓ (not all)	✓ (not all)	✓ (not all)

Q26 Generally speaking, the threshold for obtaining DNA profiles for the known person databank is that the triggering offence must be imprisonable. What offence threshold do you think is appropriate, and how do you think it should be framed? For example, should the threshold be framed as a list of triggering offences, should it be based on the maximum penalty for the triggering offence, should it be based on whether the person serves a prison sentence or should it be framed a different way?

Q27 Do you think that it is appropriate to obtain biological samples from convicted offenders for the purpose of the known person databank? If so, how do you think these samples should be collected? For instance, should they continue to be obtained by databank compulsion notice, and if so, what time limit should apply? Alternatively, do you think it would be appropriate to obtain a databank sample at the time a person is arrested and then effectively quarantine it until the relevant court proceedings have concluded?

Q28 Do you think that it is appropriate to obtain biological samples from suspects for the purpose of the known person databank? If so, how do you think these samples should be collected? For instance, if a person provides a suspect sample in relation to an investigation, should the resulting DNA profile also be uploaded onto the known person databank (prior to any court proceedings concluding)? Alternatively, should the court be empowered to order that a charged person must provide a databank sample (which can then be compared to the Crime Sample Databank) before the court proceedings against them have concluded? If so, what factors should the court take into account?

Q29 Do you think that it is appropriate to obtain biological samples from people for the purpose of the known person databank if they are not convicted offenders or suspects? If so, who should these samples be collected from and how should they be collected? For instance, do you think there should be a universal databank, and if so, how would that work in practice? Do you think police officers should be able to obtain databank samples by consent, and if so, who should they ask?

CHAPTER 12

Known person databank – use

INTRODUCTION

12.1 The Criminal Investigations (Bodily Samples) Act 1995 (CIBS Act) gives the impression that the Temporary Databank and the DNA Profile Databank (DPD) are two distinct databanks. However, in an operational sense, there is only one known person databank, which contains both DPD profiles that are on the known person databank indefinitely and Temporary Databank profiles that are on the known person databank temporarily.

12.2 In previous chapters, we have looked at how profiles are added to the known person databank and the process of forensic comparison. In this chapter, we consider other uses of the known person databank, such as:

(a) searching the databank on behalf of foreign law enforcement authorities;

(b) conducting academic research on the databank in an anonymised form;

(c) using information on the databank to maintain or administer the databank itself; and

(d) disclosing information to people whose DNA profiles are stored on the databank.

12.3 We start by providing an overview of the law that applies to use of the known person databank, before setting out the issues and options arising in relation to each of these uses.

THE LAW GOVERNING THE USE OF THE KNOWN PERSON DATABANK

12.4 The CIBS Act has separate – but very similar – provisions governing the use of information on the Temporary Databank and the DPD. Section 24R governs the use of information on the Temporary Databank, and section 27 governs use of information on the DPD. The only significant difference between the provisions is that New Zealand Police may be able to share information on the DPD with their overseas counterparts in some circumstances.

12.5 Section 24R of the CIBS Act states that no person may have access to, or disclose, any information on the Temporary Databank, except for the purpose of:[1]

(a) comparison with unidentified DNA information obtained from crime scenes for use in criminal investigations;

[1] Criminal Investigations (Bodily Samples) Act 1995, s 24R(1).

(b) making the information available under the Privacy Act 1993 to the person to whom it relates; and

(c) administering the temporary databank.

12.6 Section 27 of the CIBS Act states that no person may have access to, or disclose, any information on the DPD except for the purpose of:[2]

(a) forensic comparison in the course of a criminal investigation by Police;

(b) making the information available, in accordance with the Privacy Act 1993, to the person to whom the information relates;

(c) administering the DPD; and

(d) responding to a request under the Mutual Assistance in Criminal Matters Act 1992 (MACMA) if the Attorney-General has authorised the response and the request relates to an offence that corresponds to an offence in New Zealand that is punishable by a term of imprisonment for one year or more.

12.7 Both provisions state that these restrictions on access and disclosure do not apply to "information that does not identify any person".[3]

INTERNATIONAL USE OF INFORMATION ON THE DPD

12.8 In 2015, section 27 of the CIBS Act was amended to enable Police to use information on the DPD – but not the Temporary Databank – to assist other countries in criminal investigations. This can only be done if the foreign country formally requests that assistance under MACMA.

12.9 The rationale behind this amendment was described in Parliament by (then) Opposition MP Jacinda Ardern, as follows:[4]

> [P]eriodically the police will receive requests from overseas agencies for [a] DNA profile, and those are most likely to come from the Australian authorities … But there is an inability at present for New Zealand to legally provide information about [a] DNA profile to our counterparts in Australia, and that is because the current legislation that governs the DNA Databank is the Criminal Investigations (Bodily Samples) Act 1995, which does not permit DNA profile information to be provided for an overseas agency for the purpose of investigation.
>
> What is interesting is that we have had for some time a Mutual Assistance in Criminal Matters Act. That was put in place in 1992. Our bodily samples legislation came in 3 years later, and yet, for some reason, that legislation did not factor in the fact that we had that mutual assistance agreement.

12.10 The 2015 amendment also gave effect to the agreement New Zealand had entered with the United States on Enhancing Cooperation in Preventing and Combating Crime (the PCC Agreement) on 20 March 2013.[5] The PCC Agreement is part of a group of international information-sharing agreements for the purpose of preventing crime,

2 Criminal Investigations (Bodily Samples) Act 1995, s 27(1).

3 Criminal Investigations (Bodily Samples) Act 1995, ss 24R(3) and 27(2).

4 (21 October 2015) 709 NZPD 7470.

5 Agreement on Enhancing Cooperation in Preventing and Combating Crime, New Zealand–United States of America (signed 20 March 2013, entered into force 12 December 2017).

developed by the United States after 9/11.[6] It provides for the reciprocal exchange of fingerprint, DNA information and personal information in respect of the inspection and detection of crimes with an imprisonment penalty of one year or more, as permitted by each country's domestic legislation.

12.11 None of the legislative material associated with the 2015 amendment explains why section 27 of the CIBS Act (concerning the DPD) was amended but not section 24R (concerning the Temporary Databank). It appears to be the only way in which use of information on the DPD differs to use of information on the Temporary Databank. However, we can see a rationale for this distinction; in our view, sharing a person's DNA profile internationally when they have not been convicted of an offence would be an unjustified intrusion on privacy.

The request process in MACMA

12.12 Along with the changes to the CIBS Act in 2015, MACMA was amended to enable foreign countries to request access to information on the DPD. Section 31 of MACMA, entitled "Assistance in obtaining evidence in New Zealand", was amended to state that:

(a) a foreign country may request the Attorney-General to assist in arranging the undertaking of a forensic comparison under the CIBS Act and the production of a document specifying the result of that comparison; [7] and

(b) the Attorney-General may authorise that request, in writing, if it relates to a criminal investigation or proceeding in the foreign country and the request has been made in respect of an offence that corresponds to an offence in New Zealand that is punishable by a term of imprisonment of more than one year.[8]

12.13 In addition to these criteria, MACMA contains a number of general gate-keeping mechanisms to ensure foreign access to New Zealand investigative tools is only provided in appropriate circumstances and that the rights of individuals affected by such requests are sufficiently protected. Incoming requests must follow the appropriate form requirements and be accompanied by substantial supporting documentation.[9] MACMA also contains an extensive range of grounds on which a request must or may be refused, many of which relate to human rights considerations.[10] Each request is scrutinised and decided on a case-by-case basis by the Attorney-General, on advice from Crown Law.

Current practice

12.14 Since the 2015 amendment, Police has conducted a preliminary search of the DPD on behalf of a foreign law enforcement agency 44 times. This involved Police asking the Institute of Environmental Science and Research (ESR) to compare a foreign crime scene profile to the DPD, to identify whether there was a match. Police then advised the foreign agency whether there was a match or not. No further information was shared, unless the foreign country made a request to the Attorney-General pursuant to MACMA.

6 Fiona Ilingsworth *Briefing Agreement between the Government of the United States of America and the Government of New Zealand on Enhancing Cooperation in Preventing and Combating Crime* (Ministry of Justice, October 2013) at 1.

7 Mutual Assistance in Criminal Matters Act 1992, s 31(1)(c) as replaced on 4 February 2016 by section 4 of the Mutual Assistance in Criminal Matters Amendment Act 2015.

8 Mutual Assistance in Criminal Matters Act 1992, s 31(2)(b).

9 Mutual Assistance in Criminal Matters Act 1992, s 26.

10 Mutual Assistance in Criminal Matters Act 1992, s 27.

12.15 Only one of the 44 preliminary searches resulted in a match. It related to an unsolved murder in South Australia, which had occurred 18 years previously. In light of the preliminary search result, the South Australian Police made a MACMA request to the Attorney-General in late 2017. The matching DNA profile was then identified as belonging to a man who had been arrested in New Zealand and charged with minor offending in July 2017. When he was charged, Police obtained a sample for the Temporary Databank, which was transferred to the DPD when he was convicted. Once the Australian authorities were informed of the match, an arrest warrant was issued, and he has since been extradited to Australia to face charges.[11]

12.16 It is worth noting that Police's current practice in relation to preliminary searches broadly aligns with the approach taken under the Prüm Convention by European countries. The Prüm Convention was originally a treaty open to all European Union (EU) members. It was signed by Austria, Germany, France, Spain, Belgium and the Netherlands in 2005. In 2008, the treaty was converted into EU legislation. The Convention requires each Member State to make its fingerprint, DNA and vehicle registration databases available to other Member States for automated searches on a "hit/no hit basis".[12] If a match is found, the information remains anonymous until personal data is exchanged between countries following their own mutual legal assistance processes.[13]

Guiding principles of international cooperation

12.17 In 2016, the Law Commission completed a review of MACMA. We emphasised that New Zealand has an important role to play in being a good international citizen and in combating cross-border crime.

12.18 Our guiding principles for that review were:[14]

- Powers and investigative techniques that are available to domestic authorities should also be available for use in response to requests for assistance in foreign investigations and prosecutions.
- New Zealand must keep pace with international developments on mutual assistance and ensure its legislative regime gives effect to its international obligations in this area.
- New Zealand must ensure that it has sufficient oversight and control of any mutual assistance it provides and that it balances law enforcement needs and human rights values.

International use of the known person databank – discussion

12.19 We remain of the view that, in principle, domestic investigative tools should be made available to foreign law enforcement agencies under MACMA as long as their use is authorised by the Attorney-General on a case-by-case basis. The Attorney-General's gate-keeping role is a robust one. In light of this, we question whether it is appropriate to

11 See "Auckland man accused in Australian cold-case murder named" *Stuff* (online ed, Auckland, 28 March 2018). <www.stuff.co.nz>.

12 Council Decision 2008/615/JHA on the stepping up of cross-border cooperation, particularly in combating terrorism and cross-border crime [2002] OJ L210/1.

13 Victor Toom *Cross-border Exchange and Comparison of Forensic DNA Data in the Context of the Prüm Decision* (Policy Department For Citizens' Rights and Constitutional Affairs, PE 604.971, June 2018) at 11.

14 Law Commission *Extradition and Mutual Assistance in Criminal Matters* (NZLC IP37, 2014) at [12.29] and [12.32]; and Law Commission *Modernising New Zealand's Extradition and Mutual Assistance Laws* (NZLC R137, 2016) at [12.3].

retain the current statutory prohibition on ever sharing information on the Temporary Databank with a foreign law enforcement agency.

12.20 In addition, we note that there is legal uncertainty as to whether a familial search of the DPD could be conducted on behalf of a foreign country. The uncertainty arises because, under MACMA, the Attorney-General may authorise Police to undertake a "forensic comparison" under the CIBS Act on behalf of a foreign country. As we explain in Chapter 13, the phrase "forensic comparison" has been interpreted by the High Court in New Zealand to include a familial search.[15] In a familial search, a crime scene sample is compared to the known person databank to try and find a close match, indicating that the offender is likely related to the person on the known person databank. The Attorney-General's authorisation power is contained in a provision entitled: "Assistance in obtaining evidence in New Zealand". By its nature, a familial search is speculative. In New Zealand, it is only undertaken if the identity of the offender is unknown and all other avenues of enquiry have been exhausted. Investigators do not know whether the offender has a relative on the databank. In that context, the Attorney-General may have reservations as to whether conducting such a search on behalf of a foreign country could legitimately be described as "obtaining evidence".

12.21 Our research suggests that the Prüm Convention prohibits familial searching on behalf of another country.[16] Further, as we discuss in Chapter 13, many countries do not even allow familial searching domestically. In our view, if New Zealand has concerns about conducting a familial search on behalf of a foreign country, that concern needs to inform our policy as to the appropriateness of conducting familial searches at a domestic level. We think there need to be sound policy reasons for deviating from the principle that domestic investigative tools should be available to foreign countries through the MACMA process in appropriate cases.

Q30 What limits do you think should be placed around New Zealand Police comparing an overseas crime scene profile to the known person databank on behalf of a foreign law enforcement agency?

RESEARCH

12.22 The CIBS Act does not prohibit the disclosure of information on the known person databank (or the CSD) in anonymised form. Neither does the Privacy Act 1993.[17] So – at least arguably – the DNA profiles on the databank (that is, the actual numbers and letters) could be disclosed to researchers as long as the associated identifying information was withheld.

15 *Police v Reekers* HC Auckland CRI-2008-404-221, 8 October 2008; and Chapter 13.

16 The Convention states that databank searches for foreign countries must only be conducted on a hit/no hit basis. See also Nuffield Council on Bioethics *The forensic use of bioinformation: ethical issues* (September 2007) at [7.51], which notes that the Prüm working party recommended that new laws would be required to allow familial searching to be carried out across borders.

17 While the use of personal information is constrained under the Privacy Act 1993 by the purpose for which it was originally collected, there are exceptions to this privacy principle for anonymised research that cannot identify an individual (section 6, principle 10).

12.23 Since Police has overall responsibility for the known person databank under the CIBS Act, it would need to approve any request to access the databank for research purposes. In considering such a request, Police would apply its external research policy.[18] The Police 2018 external research policy applies to all requests by third parties for access to Police data and has these key features:

(a) Police aims to make almost any data available for research if that research is for the public good.[19]

(b) Rules around quality assurance, confidentiality and security apply.[20]

(c) There is a requirement that any research using Police data must be either pre-approved by an accredited ethics committee or reviewed by a recognised human ethics body.[21] Such an agency should preferably be based in New Zealand to ensure that the cultural impact of the research is appropriately considered.

(d) Research proposals must be approved by the Police Research Review and Access Committee, which meets every three months.[22]

(e) Once any research has been approved, the research team must sign a Police Research Agreement setting out specific terms and conditions.[23]

(f) Police periodically conducts independent audits of some external research.[24]

12.24 We understand that Police has received only one proposal to conduct research on the known person databank. The proposal was made recently by ESR and Police staff. The proposal would have involved accessing data on the DPD in order to research how effective the known person databank is in terms of deterring or preventing offending. Police National Forensics Services has advised that it declined the request to obtain DNA profile identity information from the DPD as the disclosure of this information is not permissible under the CIBS Act.[25]

12.25 Due to the growing popularity of "crime science", it seems inevitable that Police will receive further research requests in the future.

Crime science

12.26 The term "crime science" was coined in 1997. It is a field of study with the following features:[26]

18 New Zealand Police *Police policy for external researchers' access to resources, data or privileged information* (August 2018).

19 At 5 (principles 1 and 2).

20 At 6–7 (principles 4, 5 and 6).

21 At 4 the policy states: "The Police Research Agreement requires external researchers to have their research approved by an accredited institutional ethics committee or reviewed by a recognised human ethics body." See also [5.6] of the New Zealand Police *Research Review and Access Committee Research Proposal Guidelines* (August 2018).

22 New Zealand Police *Police policy for external researchers' access to resources, data or privileged information* (August 2018) at 4.

23 At 7–8.

24 At 7.

25 Criminal Investigations (Bodily Samples) Act 1995, 27(1) and (2). It is not clear whether the process for external research was followed or whether this was considered an internal request (although it certainly would not fall within the definition of administering the databank under section 27(1)(c)). See discussion at [12.51].

26 UCL Jill Dando Institute "What is crime science?" <www.ucl.ac.uk>.

- **It aims to reduce crime** through the prevention of crimes before they occur, the disruption of crimes that are occurring, the rapid detection of offenders after crimes have been committed and the management of known offenders to reduce reoffending.
- **It involves the application of scientific methods and knowledge**. Crime scientists examine who commits crime and why, what crimes they commit and how they go about it and where and when their crimes are carried out. Adopting the scientific method, they collect data, generate hypotheses about patterns and trends and build testable models to explain observed findings.
- **It is multi-disciplinary**, bringing together social and physical scientists to work towards reducing crime. This may include specialists in architecture, biology, chemistry, computer science, criminology, economics, engineering, epidemiology, geography, industrial design, mathematics, medicine, psychology, sociology, statistics and town planning.

12.27 Crime science is becoming increasingly popular internationally with universities in the United States, the United Kingdom, Netherlands, Australia and New Zealand offering courses in crime science and establishing crime science institutes.[27] The New Zealand Institute for Security and Crime Science was established at the University of Waikato in 2017.[28] This institute is working in collaboration with Police and ESR to improve frontline policing through the Evidence Based Policing Centre that was established in 2017.[29]

12.28 As crime science aims to predict criminal activity through analysing data, the DNA profile databanks would appear obvious targets for further research, but there are ethical and societal risks associated with any research into the inter-relationship between genetics and crime. The need to ensure that there are appropriate safeguards in place is underscored in New Zealand by the over-representation of Māori on the databanks, the "warrior-gene" controversy in 2006 and the emerging Māori data sovereignty movement. It is crucial that Māori perspectives are incorporated into this work.

The "warrior-gene" controversy

12.29 The "warrior-gene" controversy is an example of genetic research in New Zealand that inadvertently exacerbated racial stereotypes. To explain the impact of the research, it is first necessary to briefly outline some of the relevant science.

12.30 The controversy concerned a variant of the MAO-A gene. MAOs (monoamine oxidases) are enzymes that degrade serotonin, dopamine and adrenaline in the brain and so can affect mood, arousal, emotions and impulse control. The level of enzyme activity can vary among individuals. The proteins and the genes that code for them come in two forms – A and B.

12.31 Several versions of the MAO-A gene have been identified – categorised as high-level or low-level variants. Genetic association studies have linked the low-activity variant with anti-social behaviour and increased aggression when environmental factors are taken

27 For example, the Jill Dando Institute of Security and Crime Science (UCL), see <www.ucl.ac.uk/jill-dando-institute>; Crime science course (University of Amsterdam), see <www.uva.nl>; and Crime science course (Murdoch University), see <www.murdoch.edu.au>.

28 See <www.waikato.ac.nz/security-crime-science/>.

29 The Evidence Based Policing Unit is also discussed in Chapter 10.

into account. For example, research has suggested that those with the low-activity variant who had suffered abuse as children were more likely to develop anti-social behaviours; those with the higher-activity variant were less likely to do so.[30]

12.32 In 2006, in a presentation at an international conference on human genetics, a New Zealand scientist put forward a theory that Māori males are more likely to have a particular low-activity variant of the MAO-A gene.[31] The statement was made in the context of research into risk-taking and addiction behaviours associated with alcohol and tobacco. It was suggested that the MAO-A gene could be used as a genetic marker to improve health outcomes for Māori. The "warrior-gene hypothesis"[32] was employed to explain the significance of the research findings: the MAO-A gene could have conferred "selective advantage during the canoe voyages and inter-tribal wars that occurred during the Polynesian migrations".[33]

12.33 The conference presentation was widely reported in the media as founding a claim that this MAO-A low-activity variant was linked to risk-taking, aggressive behaviour and criminality in Māori, with headlines such as "Warrior gene blamed for Māori violence".[34]

12.34 The research sparked deep concern about using genetics to explain individual differences in behaviour. The methodology was also widely criticised as the sample size was very small (17 people).[35] The controversy highlights the challenge posed by gene-based research if it is poorly framed or misunderstood.[36]

Māori data sovereignty

12.35 In 2015, a Māori data sovereignty network, Te Mana Raraunga, was formed. This reflects a growing international movement of indigenous peoples calling for greater data sovereignty.[37]

12.36 The preamble to Te Mana Raraunga's charter states that data is a living taonga and is of strategic value to Māori.[38] The network aims to assert Māori rights and interests in relation to data and to advocate for Māori involvement in the governance of data repositories. On the specific issue of research using Māori data, the charter states that it should be consistent with frameworks for Māori research ethics, including Te Ara Tika.[39]

30 Avshalom Caspi and others "Role of genotype in the cycle of violence in maltreated children" (2002) 297 Science 851.

31 David Hall and others "Tracking the Evolutionary History of the MAOA Gene in the South Pacific" (paper presented to Institute of The 11th International Congress of Human Genetics, Brisbane, 6–10 August 2006).

32 The term "warrior-gene" was coined in 2004 after years of international research into the relationship between MAO-A and risk taking and aggressive behaviour. See Ann Gibbons "Tracking the Evolutionary History of a 'Warrior Gene'" (2004) 304 Science 818.

33 This quotation is from the researchers' explanation of the scientific rationale for the research, published in the New Zealand Medical Journal: Rod Lea and Geoffrey Chambers "Monoamine oxidase, addiction, and the 'warrior' gene hypothesis" (2007) 1250 NZMJ 5.

34 "'Warrior gene' blamed for Maori violence" *Sydney Morning Herald* (online ed, Sydney, 9 August 2006).

35 Peter Crampton and Chris Parkin "Warrior genes and risk-taking science" (2007) 1250 NZMJ 63.

36 Patrick Whittle "Health, inequality and the politics of genes" (2010) 1320 NZMJ 67; and Grant Gillett and Armon Tamatea "The warrior gene: epigenetic considerations" (2012) 31 New Genetics and Society March 41.

37 Tahu Kukutai and John Taylor "Data sovereignty for indigenous peoples: current practice and future needs" in Tahu Kukutai and John Taylor (eds) *Indigenous Sovereignty: Toward an Agenda* (ANU Press, Canberra, 2016) 1.

38 Te Mana Raraunga – Māori Data Sovereignty Network *Charter* (2016) at 1.

39 At 3.

12.37 Te Ara Tika provides guidelines for ethics committee members to address Māori ethical issues in making decisions about research, particularly in the health sector.[40] The guidelines identify that genetic research is an area of prime sensitivity for Māori because of the association with whakapapa. It explains that:[41]

> Communities are also concerned about new technologies and research in areas such as genetic engineering, the creation of transgenic life-forms, and human genome research investigating human variation and diversity in indigenous populations.

12.38 In light of this heightened concern, the guidelines state that researchers should be aware of the following:[42]

(a) Informed consent – Māori favour the recognition of both individual and collective consents. An appropriate collective may approve research in principle at the start of a study. Individuals may then decide whether to participate.

(b) Ongoing communication with participants – such as informing donors and their families what happened to their tissue and for which research projects it has been included.

(c) Interpretation of results – the guidelines state: "Due care should be taken when conducting ethnic specific analyses, particularly in genetic studies, as there is always the potential for community disruption, stigmatisation, stereotyping or undermining either through research processes or outcomes. Care needs to be taken to avoid such harms through the use of incorrect terminology, for example 'Māori genes'."

(d) Intellectual property – this is of particular concern if the research concerns the use of traditional plants and other natural resources.

(e) Representation – Māori ethics committee members, along with their colleagues, need to assess whether appropriate Māori consultation has occurred.

(f) Benefit sharing – researchers will legitimately benefit from being involved in research, but consideration should be given to how participants and their communities might also benefit.

12.39 The Māori data sovereignty movement and Te Ara Tika emphasise that Māori participation in decision making concerning Māori data is crucial.[43]

Academic use of the know person databank – discussion

12.40 Police policy currently ensures that any application to use the known person databank for research purposes is approved or reviewed by an ethics committee, preferably a New Zealand committee. Our understanding is that Te Ara Tika is widely used by ethics committees in New Zealand, so this guidance is likely to be taken into account. However, the Police external research policy does not apply to Police internal research, and because of the way the external policy is worded, it is not immediately apparent whether it would apply to agencies working in collaboration with Police, such as ESR, the Evidence

40 Pūtaiora Writing Group *Te Ara Tika: Guidelines for Māori Research Ethics – A framework for researchers and ethics committee members* (Health Research Council of New Zealand, 2010). The Guidelines themselves note that they should be used in conjunction with the Ministry of Health's Operational Standard for Ethics Committees.

41 At 15.

42 At 15–18.

43 In Chapter 14, we explore some of the Te Ara Tika principles in relation to the retention of biological samples and DNA profiles, as well as some of the difficulties of applying ethical principles designed in a health context to criminal investigations.

Based Policing Centre or the New Zealand Institute of Crime Science. This highlights the need to ensure that Māori have a central role in decision making about use of the databanks.

Transparency

12.41 Police's external research policy is a general one. It is not specific to DNA or to the known person databank. The policy does not apply to internal research, and it is not immediately clear whether it would apply to research done by other agencies in collaboration with Police. That is because the policy states that "the Director of Research and Evaluation, in consultation with a member of the Police Executive, may declare any researcher not subject to the policy". The policy specifies when this may occur:[44]

> when work is a collaboration directed by Police with another agency, where there is an inter-agency Memorandum of Understanding or other form of relationship that is taken into consideration.

12.42 The lack of transparency is problematic because of the ethical risks with conducting research into genetics and crime. How would those risks be balanced against any identified "public good"? Furthermore, even if the proposed research had nothing to do with crime, the dataset has an in-built bias. It was not collected randomly – it was obtained from people who came into contact with Police – so would it be appropriate to draw any non-crime-related general conclusions from it? Should *any* research on the DNA profile databanks, in anonymised form, be permitted?

Māori governance

12.43 As well as broad concerns about who the policy applies to and how it would be applied in practice, it is important to ensure Māori have an appropriate role in decision making.

12.44 As discussed in Chapter 11, the vast majority of databank samples are now obtained by compulsion rather than consent. In those circumstances, it may not be appropriate to ask individuals to provide informed consent and to engage with ongoing academic research, particularly as the research may not be to their benefit. It may also be inefficient, as a general consent to future research would be meaningless and locating individuals at the time the research proposal is submitted would pose a significant administrative burden. If it is not viable for individuals to be involved in the decision making about use of data about them, this increases the need for Māori interests to be represented at a collective level. This would provide some avenue for consent, ongoing dialogue and consultation, appropriate interpretation of results and benefit sharing.

12.45 The involvement of Māori collective groups makes particular sense in the context of DNA profiles because they contain whakapapa information. As we explained in Chapters 2 and 9, whakapapa information is tapu and a taonga. It may engage collective privacy interests and the principles of active protection and rangatiratanga under the Treaty. Therefore, it makes sense for Māori collectively to have an active kaitiaki (guardian/advocate) role in protecting the databanks from inappropriate use. While any governance group should have the capacity to consider Māori interests, if the group operates on a consensus basis, Māori members may feel pressured to compromise. We therefore consider that the role could be strengthened and given greater visibility, as we discuss further below.

[44] New Zealand Police *Police policy for external researchers' access to resources, data or privileged information* (August 2018) at 2.

Is it possible to anonymise a DNA profile?

12.46 The Police policy on external research states that the confidentiality of any dataset released for research purposes will be maintained.[45] It explains that details will be removed to minimise the likelihood of "spontaneous recognition". Further datasets will be modified so that the identification of individual information is unlikely without an outside party spending a disproportionate amount of time, effort and expertise on the task.

12.47 However, as explained in Chapters 6 and 10, we are not convinced that a DNA profile can be truly anonymised. That is because DNA profiles are obtained by Police exactly because they can be used to accurately identify individuals.

Options for reform

12.48 Given that the CIBS Act does not prohibit access to anonymised DNA data and given the risks of such access and use, we think reform is required. We are considering one or a combination of the following options:

(a) A statutory prohibition: The CIBS Act could prohibit academic research using any information on the DNA profile databanks. This would be a transparent approach and would promote certainty, but it could unnecessarily inhibit beneficial uses of the data.

(b) Approval or oversight by an independent body: Such a body could approve and/or audit any academic research undertaken by Police, ESR or external researchers using the databanks. Upholding the principle of partnership, Māori should have a central role in any oversight body. Any oversight body should be required to consider guidelines on Māori ethical issues, such as Te Ara Tika. Overseas, it is relatively common for an oversight body with a specific mandate to monitor DNA profile databanks (or forensic sciences or biometric data more generally) to pre-approve applications to conduct academic research. For example, in the United Kingdom, the Biometric and Forensic Ethics Group performs this function.[46]

(c) A kaitiaki role: A variation on the oversight option would be to set up an additional group with a kaitiaki role to provide accountability and support for the Māori members of the oversight body with the power to approve or veto use of Māori data. An example of such a group is the National Kaitiaki Group, which considers applications to disclose, use or publish information held on the National Cervical Screening Register that belongs to Māori women.[47] This information is classed as "protected"[48] and cannot be dealt with unless the Kaitiaki Group grants approval (either with or without conditions).[49] The group is made up of three to six members appointed by the Minister of Health upon consultation with others, including the Ministers of Māori Affairs and Women's Affairs and any other person considered appropriate.[50] This approach would recognise that consensus decision making is standard practice for ethics committees but risk Māori representatives feeling

45 At 6–7 (principle 5).

46 Oversight is discussed in Chapter 15.

47 The Kaitiaki Group was established pursuant to the Health (Cervical Screening (Kaitiaki)) Regulations 1995.

48 Under reg 2 of the Health (Cervical Screening (Kaitiaki)) Regulations 1995, "protected information" means information that is "on or from the Register" and "identifies the woman or women to whom the information relates as being Maori".

49 Regulation 5.

50 Regulation 7. The Minister must consult the Ministers of Māori Affairs and Women's Affairs and any other person considered appropriate.

pressured to compromise if they do not share the majority view. This approach would also recognise the current over-representation of Māori on the databank and uphold the principles of partnership and rangatiratanga.

(d) **Approval or oversight by independent body and ad hoc kaitiaki role:** A further variation on the oversight option is to have an oversight body as described in (a) above and a kaitiaki mechanism that could act on an ad hoc basis to provide accountability and support for the Māori members of the oversight body.

Q31

Should the DNA profiles on the known person databank ever be made available for research in an "anonymised" form? If so, in what circumstances and how do you think that the request/approval process should be managed?

ADMINISTERING THE DATABANK

12.49 The CIBS Act allows the known person databank to be used for the purpose of "administering the databank".[51] While seemingly straightforward, this provision raises some practical issues.

12.50 On a day-to-day basis, the DNA profile databanks are maintained by ESR on behalf of Police. In addition to the core work of undertaking forensic comparisons and sending link reports, ESR also generates other reports using the known person databank for Police.[52] Examples include:

(a) duplicate reports – these provide information on databank profiles that are duplicates in that the profiles already exist on the databank;

(b) daily status reports – these provide details of databank samples that were received and/or profiled from the previous day; and

(c) deletion reports – these provide details of databank profiles that have been deleted.

The generation of these reports is clearly part of "administering the databank".

12.51 ESR also uses the information on the known person databank for research and development connected with upgrading processes and introducing new technologies and equipment. ESR describes this as "internal validation" work. It is required to ensure that new technology, equipment and processes are at the standard required for use. For example, when ESR shifted from using Identifiler (a DNA profiling kit that targets 15 STRs) to Globalfiler (a DNA profiling kit that targets the same 15 STRs plus six extra STRs), ESR used Globalfiler to retest biological samples that had previously been profiled with Identifiler. In this way, it could confirm the accuracy of the new kits. We understand that, while most validation work is done using biological samples provided by consent by ESR staff members, ESR needs to use individual profiles from the known person databank for the final step in the validation process.

51 Criminal Investigations (Bodily Samples) Act 1995, ss 24R(1)(c) and 27(1)(c).

52 Note that ESR has internal guidelines on the Criminal Investigations (Bodily Samples) Act 1995 that provide that the DNA databanks (known person and Crime Sample Databank) will be used for checking for duplication entries, checking for matches between the crime sample databank and the known person databank, mixture matching of unresolved profiles and comparing all profiles on the crime sample databank against each other to look for links.

12.52 This internal validation work is clearly important, but we question whether it falls neatly within the ordinary meaning of "administering the databank". If there is any doubt around this, we consider that this should be clarified in new legislation. Given our concerns around academic research, it might also be beneficial to define "internal validation" in statute. This would create some certainty around the line between internal validation – such as upgrading to a new DNA profiling kit, which would not be prohibited/require external approval – and more general research, whether conducted by ESR, Police or external researchers.

PERSONAL USE

12.53 The CIBS Act provides that information on the known person databank is available, "in accordance with the Privacy Act 1993, to the person to whom the information relates".[53] Again, while this is seemingly straightforward, continuing advancements in DNA analysis raise some confusion.

Can a DNA profile reveal a genetic disorder?

12.54 As we explain in Chapter 4, when the CIBS Act was originally enacted, there was little concern around informational privacy. This probably stemmed from the initial belief among scientists that traditional STR profiling targeted "junk" DNA. As such, it was thought that it revealed no personal information beyond the sex of a person.[54] However, understanding of DNA has grown exponentially in recent years. In May 2009, the President of the Canadian College of Medical Geneticists testified before the Canadian Standing Senate Committee on Legal and Constitutional Affairs. The President's testimony included the statement that:[55]

> The information that is obtained from the analysis of the 13 DNA markers used for identification purposes can have direct medical relevance.[56] There are numerous claims that these regions are anonymous and, other than [sex], do not provide specific medical or physical information about the donor, but the use of these markers can, in fact, detect the presence of changes in the copy number of very large segments of DNA. In other words, it is not designed to do this, but it can do it by circumstance. It is not a very sensitive way of getting medical information, but it can. The list of conditions that this type of profiling can detect includes, but is not limited to, any difference in the number of sex chromosomes as well as Down syndrome or what is commonly known as trisomy 21. DNA profiling will very effectively detect that.
>
> No DNA information is truly anonymous, since any portion of the DNA has potential to reveal personal details about an individual.

12.55 Most of the conditions mentioned in this testimony would probably already be known to the person concerned. However, as we discussed in Chapter 7, there is no statutory limit on the type or amount of information that could be included in a DNA profile. There is also a trend towards including more STRs and possibly even SNPs that come from the coding regions of the genome. In the future, the most effective way of DNA profiling may

53 Criminal Investigations (Bodily Samples) Act 1995, ss 24R(1)(b) and 27(1)(b).

54 See discussion in Chapter 4.

55 See the Canadian Standing Senate Committee on Legal and Constitutional Affairs *Public Protection, Privacy and the search for balance: A Statutory review of the DNA Identification Act – Final Report* (Canadian Senate, June 2010) at 52.

56 These 13 DNA markers or STRs are all included in the Identifiler and Globalfiler kits used by ESR for DNA profiling in New Zealand.

involve whole genome sequencing and destroying any information that is not needed for law enforcement purposes.[57] If whole genome sequences are generated and stored for any length of time though, what would that mean for the rules around access to personal information?

12.56 These observations are important because, depending on what is in a DNA profile and how it is generated, a person requesting access to their profile could inadvertently learn more about themselves than they were prepared for.[58] They may also have legitimate concerns about the justification for law enforcement authorities generating this information in the first place.

12.57 By way of example, there is a test to determine if a person has the genetic markers for Huntington's disease, a fatal disease that has no cure.[59] These markers are not currently revealed by forensic DNA profiling but, theoretically, could be in the future.[60] In relation to this test, the US National Human Genome Research Institute notes:[61]

> Deciding to be tested for Huntington's disease (HD) can be difficult. Individuals consider genetic testing to confirm a diagnosis when clear symptoms are present and there is a documented family history of HD. Others who have a parent with the disease elect to be tested to resolve uncertainty about their future. A negative test relieves anxiety and uncertainty. A positive test enables individuals to make decisions about careers, marriage and families.
>
> Some who are at risk choose not to take the test.

12.58 Genetics experts are reluctant to make a test available to an individual without full genetic counselling and a psychological evaluation. The consensus is access to all genetic information is not necessarily beneficial and can in some situations be harmful.[62] Therefore, careful consideration needs to be given to collecting this information as a by-product of forensic DNA profiling because privacy laws may then require that personal genetic information to be disclosed to the person on request and without any safeguards or support for that person in relation to what that information might reveal.

12.59 Beyond the psychological considerations that could potentially arise, access to such information may also affect a person's prospects of obtaining life insurance and health insurance as they would need to disclose it.[63] In Australia earlier this year, a Parliamentary Joint Committee on the life insurance industry found that an individual's genetic information could be used by insurers to charge a higher premium or to exclude

57 See Chapter 3 for discussion of techniques that are being considered internationally and Chapter 7 for discussion of when and how Police and ESR decide when to introduce new analysis techniques.

58 This includes both the person's profile on the databank and any crime scene profile that it matches. As explained in Chapter 6, once a crime scene profile is matched to a known person, any information obtained from the crime scene sample is attributable to the known person.

59 Segments of genetic code can be activated by environmental factors (epigenetics), which means that a genetic marker for a particular disease does not necessarily mean that a person who has that marker will get that disease: Armon Tamatea "Biologizing Psychopathy: Ethical, Legal, and Research Implications at the Interface of Epigenetics and Chronic Antisocial Conduct" (2015) 33 Behav Sci Law 629 at 630.

60 See Chapter 3 for discussion of techniques that are being considered internationally and Chapter 7 for discussion on how Police and ESR decide when to introduce new analysis techniques.

61 National Human Genome Resource Institute "Learning About Huntington's Disease" (17 November 2011) <www.genome.gov>.

62 Sonia M Suter "All in the family: privacy and DNA Familial Searching" (2010) 23 Harv J L & Tech 309 at 348.

63 A small survey by Newsroom found New Zealand insurers take different approaches to risks in people's DNA: Eloise Gibson "How your genes affect your insurance" (10 April 2017) Newsroom <www.newsroom.co.nz>. There may also be a risk of insurance information security breaches.

insurance cover for certain medical conditions.[64] The Committee noted that several countries have enacted legislation or voluntary agreements to restrict or fully ban the use of genetic information by insurance companies.[65] The Committee recommended a moratorium be imposed on life insurers using predictive genetic information unless it was provided by a customer to prove they were not at risk of developing a certain disease.[66]

12.60 There is also an issue as to whether there could be circumstances when Police may have a duty to disclose information about a genetic disorder to the individual.[67] For example, malignant hyperthermia is a rare genetic disorder that can cause death (as a reaction to drugs used during surgery) and can now be diagnosed by a DNA test.[68] If this type of information came to Police's attention from the analysis of a DNA sample taken pursuant to the CIBS Act, should Police have a duty to disclose it to the individual?

12.61 The possibility of DNA profiles revealing genetic disorders is highly problematic from a privacy perspective. This is another reason why consideration should be given to limiting the type of information that should be included in DNA profiles.[69]

To whom does the information relate?

12.62 An interesting privacy issue arises for the close relatives of people who have DNA profiles on the known person databank. The advent of familial searching means that the known person databank can be used to identify such close relatives as potential suspects in criminal investigations.[70] Does this therefore mean that a DNA profile on the known person databank relates to both the person who provided the databank sample and their close relatives? If so, could a close relative request access to the profile under the CIBS Act and the Privacy Act by claiming that they are a person "to whom the information relates"?[71] This issue is also relevant to our discussion above of Māori collective interests in DNA profiles.

12.63 In practice, the answer to this question is no, for two reasons. First, the Privacy Act states that personal information only needs to be provided to a person to whom it relates if it can be readily retrieved.[72] If a person requests DNA information about a close relative on the basis that they are a person "to whom the information relates", Police would need to ensure that this is in fact the case before releasing that information to them. That is, Police would need to ensure that the person requesting the information is in fact a genetic relative of the person whose DNA information they are requesting – otherwise they would not be a person "to whom the information relates", and would not be able to request the information on that basis. This may mean that the putative relative would

64 Commonwealth of Australia Parliamentary Joint Committee on Corporations and Financial Services *Life Insurance Industry* (Senate Printing Unit, March 2018) at [9.85].

65 At 138–144.

66 At 156.

67 For instance, if analysis at a certain locus revealed a chromosomal defect or if in the future a decision was made to analyse certain markers that reveal information on certain genetic disorders. See also footnotes 54 and 55.

68 Medical Research for Life "Gene genius's life-saving work" <http://medicalresearchforlife.org.nz>.

69 This is discussed in further detail in Chapter 7.

70 Familial searching is discussed in Chapter 13.

71 This phrase is used in sections 24R and 27(1) of the Criminal Investigations (Bodily Samples) Act 1995. Information privacy principle 6 in section 6 of the Privacy Act 1993 states that personal information can be accessed by the "individual concerned". Section 2 of the Privacy Act defines "individual concerned" as "the individual to whom the information relates."

72 Privacy Act 1993, s 6 (information privacy principle 6(1)).

need to provide Police with a biological sample. Then Police would need to ask ESR to generate a DNA profile from the sample and to compare it to the known person databank to find any near matches. It is unlikely that this would qualify as information that can be readily retrieved.

12.64 Second, the Privacy Act also states that an agency may refuse to disclose any personal information it holds if that "would involve the unwarranted disclosure of the affairs of another individual".[73] In most circumstances, the disclosure of a person's DNA profile to their close relative would involve just that. Even the fact of their profile being on the databank itself would be an unwarranted disclosure – never mind the information the profile contains. The exception would be if the person themselves consented, but in that scenario, the person may as well have requested the information themselves and then provided it to their relative.

12.65 There are sound practical and privacy reasons for the current approach – a person cannot request information about a close genetic relative on the database.

[73] Privacy Act 1993, s 29(1).

CHAPTER 13

Familial searching

INTRODUCTION

13.1 In exceptional cases, New Zealand Police may ask the Institute of Environmental Science and Research (ESR) to compare a DNA profile derived from a crime scene sample to the profiles on the known person databank to look for near matches. A near match is when two DNA profiles are similar but not exactly the same; the profiles could not have come from the same person but may have come from people who are close genetic relatives. In other words, it may mean that the crime scene sample was left behind by a close relative of the person on the known person databank. This technique is known as familial searching.

13.2 This chapter explains the law in this area, how familial searching is used in practice by Police and the issues this raises. We then discuss some options for reform.

THE LAW RELATING TO FAMILIAL SEARCHING

13.3 The Criminal Investigations (Bodily Samples) Act 1995 (CIBS Act) does not expressly mention familial searching. The technique was first used in 2004.[1] However, its legal status was not considered until 2008 in *Police v Reekers*.[2] In that case, the High Court determined familial searching to be lawful on the basis that it falls within the definition of "forensic comparison" under section 27(1)(a) of the CIBS Act. This section provides that the DNA profile databank (DPD) can be used for the purpose of forensic comparison in the course of a criminal investigation by Police. Justice Woodhouse stated that he was:[3]

> satisfied that the disclosure of the sister's DNA profile to the Police, and the use the Police made of it, was for the purpose of forensic comparison. There is nothing in the definition of forensic comparison which restricts the purpose to comparison of the DNA profile in the databank to determining whether another sample came from the person who supplied the databank profile. The relevant "purpose" is that contained in the definition of forensic comparison – "the purpose of confirming or disproving the involvement of any person in the commission of an offence".

13.4 Although *Reekers* related to familial searching on the DPD, it follows that familial searching can also be lawfully undertaken on the Temporary Databank. Although the wording is slightly different, the corresponding provision relating to the Temporary Databank provides that it can also be used for the purpose of comparison with

1 Nessa Lynch and Liz Campbell *The Collection and Retention of DNA from Suspects in New Zealand* (Victoria University Press, Wellington, 2015) at 209.

2 *Police v Reekers* HC Auckland CRI 2008-404-221, 8 October 2008.

3 *Police v Reekers* HC Auckland CRI 2008-404-221, 8 October 2008 at [19].

unidentified DNA information from crime scenes for the purpose of a criminal investigation by Police.[4]

CURRENT PRACTICE

13.5 Familial searching has been characterised as "increasing the footprint of the database without Parliament having legislated for that increased footprint".[5] Given the lack of guidance in the CIBS Act and aware of the legal and ethical implications associated with familial searching, ESR and Police have agreed on a protocol to govern when familial searches can be undertaken (the Protocol).[6]

13.6 The Protocol refers to the "National DNA Profile Databank" as an umbrella term for both the DPD and the Temporary Databank. In effect, this means that, whenever a familial search occurs, the whole known person databank is searched.

13.7 The Protocol states that Police should only request ESR to conduct a familial search on a case-by-case basis. Such a request needs the prior approval of a Police District Crime Manager and will only be made if:

(a) there is an investigation into a "serious offence";

(b) there is "no DNA link resulting from a specific crime profile search"; and

(c) it is considered "necessary and proportionate" in the circumstances of the case.

The term "serious offence" is not defined in the Protocol.

13.8 The Protocol explains that:

> a familial search will result in a list of potential close relatives to the offender … The list ESR provides to Police is ranked statistically on the basis of how likely a person will be a relative of the offender.

13.9 The list can comprise any number of profiles, from a handful to hundreds.[7] Most if not all these near matches will be false positives – the person identified as a near match will not be related to the offender. Police has told us that it therefore does not take further action – for example, approaching the person for questioning – on the basis of a near match alone. Some corroborating intelligence is always required.

13.10 Since 2004, Police has conducted more than 101 familial searches in 60 cases. We do not have detailed information about the more recent cases, but in respect of the first 36 cases:[8]

(a) there were 26 sexual assault cases, five homicides, two unidentified remains cases, one missing person, one arson and one aggravated robbery; and

(b) two investigations where familial searching was used resulted in convictions.[9]

4 Criminal Investigations (Bodily Samples) Act 1995, s 24R(1)(a).

5 Tony Wall "Privacy fear for DNA dragnet" *Sunday Star Times* (online ed, Auckland, 20 January 2013).

6 Dated 25 September 2012. A copy of the Protocol is at Appendix 3.

7 ESR has told us that a likelihood ratio is calculated to determine the strength of each correspondent, and a threshold of 1,000 is set. The number of names above the threshold therefore varies for each case. The results are discussed with Police on a case-by-case basis. Police may request all the names above the threshold or only a certain number from the top of the list.

8 Nessa Lynch and Liz Campbell *The Collection and Retention of DNA from Suspects in New Zealand* (Victoria University Press, Wellington, 2015) at 209.

9 *Police v Reekers* HC Auckland CRI 2008-404-221, 8 October 2008; and *R v Jarden* [2009] NZCA 367 (familial search conducted in 2007).

ISSUES WITH FAMILIAL SEARCHING

Is familial searching consistent with section 19 of NZBORA?

13.11 Although the lawfulness of familial searching was considered and confirmed in *Reekers,* the courts have not been asked to expressly consider whether familial searching is consistent with the New Zealand Bill of Rights Act 1990 (NZBORA).[10]

13.12 In Chapter 2, we noted that familial searching has the potential to discriminate on the grounds of family status and race. Discrimination on these grounds is in direct conflict with section 19(1) of NZBORA.[11]

13.13 For an act or omission to amount to discrimination under section 19(1):[12]

(a) there must be a differential treatment or effects as between persons or groups in analogous or comparable situations on the basis of a prohibited ground of discrimination; and

(b) the treatment must have a discriminatory impact in that it imposes a material disadvantage on the person or group differentiated against.

Differential treatment

13.14 More than 101 familial searches have been conducted in New Zealand, each resulting in a list of potential persons of interest. We do not know how many of the individuals on those lists were spoken to by Police and/or had family members who came under investigation. We do know that there is a group of people of unknown size who have been investigated by Police for crimes they did not commit. Those people only came to Police's attention because of the previous actions of their family members.

13.15 When considering whether familial searching results in differential treatment, it is appropriate to compare those individuals who have a close relative with a DNA profile on the known person databank (the relatives) with those who do not (the non-relatives). Familial searching means that the relatives group are more likely to be investigated by Police for a crime they did not commit than the non-relatives group.

13.16 This differential treatment is likely to be more pronounced for the adult Māori community as its members disproportionately fall within the relatives group.

13.17 In the Court of Appeal case of *Ngaronoa v Attorney-General,*[13] the appellant argued that the provision disqualifying prisoners from voting in the Electoral Act 1993 indirectly discriminated against Māori. The Court of Appeal accepted that there was differential treatment but concluded that there was no discriminatory impact. In considering differential treatment, the Court of Appeal identified Māori and non-Māori voters as an appropriate comparator group. The Court concluded that there was differential treatment because a much greater percentage of the Māori voting community was in

10 The New Zealand Bill of Rights Act 1990 applies to Police and ESR by virtue of section 3.

11 Section 19(1) of the New Zealand Bill of Rights Act 1990 provides that everyone has the right to be free from discrimination on the grounds set out in section 21 of the Human Rights Act 1993. Included in those grounds are race and family status.

12 *Ministry of Health v Atkinson* [2012] NZCA 184, [2012] 3 NZLR 456 at [55] and [109].

13 *Ngaronoa v Attorney-General* [2017] NZCA 351, [2017] 3 NZLR 643.

prison and therefore that group was "disproportionately affected by the disqualification provision".[14]

13.18 Applying this reasoning to familial searching, it is reasonable to extrapolate that Māori adults are much more likely to have a close relative on the known person databank than non-Māori adults and will therefore be disproportionately affected by familial searches. Tentative calculations suggest that around 15 per cent of the Māori population aged 15 years or over have a DNA profile on the known person databank. By comparison, using the same formula, calculations suggest that only 3.4 per cent of the adult non-Māori population have a profile presence.[15]

Discriminatory impact

13.19 Whether the relatives group are materially disadvantaged because they face a heightened risk of being investigated for a crime they did not commit depends in part on the likelihood of the risk. Current practice heavily restricts the use of familial searches. Accordingly, only a small percentage of the relatives group are likely to be investigated for a crime they did not commit. Someone in that group is likely to be the source of the crime scene profile and may therefore have committed the offences in question. However, given the high proportion of false matches, this may only be a small number. Furthermore, this fact is relevant to whether familial searching could be justified under section 5 of NZBORA – which states that rights may be subject "only to such reasonable limits prescribed by law as can be demonstrably justified in a free and democratic society" – rather than to the question of whether the other members of the relatives group could be materially disadvantaged.

13.20 For those relatives who are investigated for offences they did not commit, there is potentially significant harm. Simply being investigated for an offence can cause distress and stigma. Further, family relationships could be damaged. As one commentator on familial searching notes:[16]

14 At [147].

15 We have calculated these figures based on the following information: Statistics New Zealand estimates that, as at 30 June 2018, the New Zealand population aged 15 years was 3,923,600: <www.stats.govt.nz/tools/nz-dot-stat>. Of those, it was estimated that 516,700 were Māori (13 per cent) and 3,923,600 were non-Māori. As at 30 June 2018, Police annual reports recorded that there were 194,305 DNA profiles in total held on the DPD and the Temporary Databank. Police is unable to provide an ethnic breakdown of all of the profiles on the DPD and the Temporary Databank. However, it has provided the Law Commission with data (see Chapter 11) that shows that, between 2012 and 2018, on average, 42 per cent of profiles transferred to the DPD were from adults aged 17 years and over who self-identified as Māori. Over this same period, 67 per cent of profiles transferred to the DPD were from children and young persons who self-identified as Māori (we are unable to isolate which of these are children, but it is unlikely to be many). Police annual reports from 30 June 2011 to 30 June 2018 show that an average of 40 per cent of profiles obtained for the Temporary Databank under Part 2B were from people aged 14 years or over who self-identified as Māori. Therefore, based on this data, we suggest that it is likely that approximately 40 per cent of all of the profiles on the known person databank are from Māori. This equates to 77,722 profiles being from Māori and 116,583 from non-Māori. The number of profiles from Māori (77,222) as a proportion of the Māori population aged 15 years and over (516,700) equates to 15.04 per cent. We therefore tentatively suggest from these figures that 15.04 per cent of the Māori population has a profile on the known person databank. (We acknowledge that this figure will not be exact – for instance, there are likely some duplicate profiles and some profiles from children or 14-year-olds on the known person databank, which may skew this slightly.) We have extrapolated from the same data that, in respect of the non-Māori population, if their profiles (116,583) are calculated as a proportion of the non-Māori population aged 15 years and over (3,406,900), this means that 3.4 per cent of non-Māori have a population on the known person databank.

16 Ellen Nakashima "From DNA of Family, A Tool to Make Arrests" *The Washington Post* (online ed, Washington DC, 21 April 2008) as cited in David Kaye "The Genealogy Detectives: A Constitutional Analysis of Familial Searching" (2013) 50 Am Crim L Rev 109 at 156, n 295.

> I don't think anyone is going to be falsely convicted… it's the time, hassle and indignity of being interviewed by the police. How much is that worth? How much does that cost a person? I don't know but it's not zero.

13.21 It is especially important to consider the impact that this could have on Māori, for whom any interaction with Police may be informed by a history of negative interactions, unconscious or overt bias and associated feelings of disconnection and victimisation.

13.22 The risk of being materially disadvantaged will only materialise in a small number of cases. Individuals may be unaware that their relatives' profiles are on the databanks, may be unaware of the practice of familial searching and/or may have never approached by Police. Therefore, for many of the relatives, there will be no impact at all. Further, society has to accept the general proposition that some investigative leads will not be fruitful. Without that acceptance, Police could not effectively operate.

13.23 Notably in *Ngaronoa*, the Court of Appeal held that, because only one per cent of the group would be affected by the voting disqualification, the group as a whole were not materially disadvantaged. Applying that reasoning to familial searching, it could be argued that, because only a small number of the relatives are likely to be directly affected, there is no material disadvantage.

13.24 However, in *Ngaronoa*, there was no suggestion that the prisoner disqualification provision had a particularly significant impact in and of itself on any individual within the group. The case was argued on the basis that there was a downstream impact on Māori as a voting community. The appellants submitted that the disqualification provision could result in a reduction in the number of Māori electorates. The Court of Appeal found that the available data did not support that submission. By contrast, here the argument is that in and of itself the differential treatment will cause harm to the individuals in the relatives group and/or the adult Māori community – not to all individuals in those groups, but to some of them.

13.25 It is not clear whether the differential treatment is discriminatory. At a certain point, the risk of being needlessly investigated based on the actions of a relative seems likely to reach the threshold of being a "material disadvantage". For example, if the risk of investigation by Police was likely to eventuate for 95 per cent of the relatives group, that would surely qualify as a material disadvantage for the group as a whole. Whether that threshold is met appears to be a live question.

13.26 There is a real risk that familial searching may result in differential treatment that is discriminatory in terms of section 19(1) of NZBORA. If the practice of familial searching becomes more widespread, that risk will increase.

Demonstrably justified and prescribed by law

13.27 If there is prima facie discrimination under section 19(1) of NZBORA, section 5 of NZBORA states that the right may be subject "only to such reasonable limits prescribed by law as can be demonstrably justified in a free and democratic society".

Demonstrably justified

13.28 The Supreme Court in *Hansen v R* has provided guidance on how to determine if a limitation on a right is "demonstrably justified". The starting point is to determine the

objective of the limiting measure.[17] The current objective of familial searching is to resolve investigations into serious criminal offending such as sexual assaults and homicides.[18]

13.29 The second step is to decide whether that objective is important enough to justify some limitation on the right.[19] In *Hansen*, the Supreme Court found that the prosecution of drug dealers was an issue of "serious and pressing social concern" that warranted some limitation on the presumption of innocence.[20] This objective appears comparable to the objective of resolving investigations into "serious offences" in the context of familial searching.

13.30 The third step is to examine whether there is a rational connection between the limiting measure (familial searching) and the objective (resolving investigations into serious offences). All that is required is a logical relationship. Of the 101 searches conducted to date, only two resulted in convictions. They concerned very serious offending: rape and murder.[21]

13.31 As well as identifying potential suspects, familial searching may result in individuals being excluded from further investigation. It is not clear whether and how often this occurs. The High Court has clarified that the rational connection test is a threshold issue to be considered at an "abstract level"; empirical evidence is not required.[22] With that in mind, the fact that familial searches have resulted in two convictions means that familial searching appears to meet the rational connection test.

13.32 The fourth and fifth steps require an assessment of whether the limiting measure is no greater than reasonably necessary and is proportionate to the objective.[23] Police has taken a conservative approach to familial searching, advising us that it is used "sparingly" and "only when a serious offence is involved and no DNA link has resulted from a crime scene profile search and other lines of enquiry have been exhausted".[24] Police is very cautious about following up on the near matches, advising us that further investigative work is always required to determine the next steps in the investigation. This approach seems to fulfil the "minimal impairment" test in *Hansen*.[25] Given the importance of the objective of familial searching, this approach also seems proportionate.

Prescribed by law

13.33 While we believe the limit on the right to be free from discrimination is demonstrably justified, to satisfy section 5 the limit must also be prescribed by law. In *R v Hansen*, McGrath wrote:[26]

17 *Hansen v R* [2007] NZSC 7, [2007] 3 NZLR 1 at [120]–[124] per Tipping J.

18 The Protocol states that only an investigation into a "serious offence" will justify a familial search.

19 *Hansen v R* [2007] NZSC 7, [2007] 3 NZLR 1 at [120]–[124] per Tipping J.

20 *Hansen v R* [2007] NZSC 7, [2007] 3 NZLR 1 at [125] per Tipping J.

21 The United Kingdom appears to have had more success here. Although we have not yet been able to source current United Kingdom data, as at 2012, 200 familial searches had resulted in 44 arrests: Nessa Lynch and Liz Campbell *The Collection and Retention of DNA from Suspects in New Zealand* (Victoria University Press, Wellington, 2015) at 209. There is however no reported data of how many convictions resulted in the United Kingdom.

22 *Attorney-General v IDEA Services Ltd* [2012] NZHC 3229, [2013] 2 NZLR 512 at [220].

23 *Hansen v R* [2007] NZSC 7, [2007] 3 NZLR 1 at [123].

24 Dated 25 September 2012.

25 *Hansen v R* [2007] NZSC 7, [2007] 3 NZLR 1 at [126]; and *Ministry of Health v Atkinson* [2012] NZCA 184, [2012] 3 NZLR 456 at [182].

26 At [180].

> To be prescribed by law, limits must be identifiable and expressed with sufficient precision in an Act of Parliament, subordinate legislation or the common law. The limits must be neither as hoc nor arbitrary and their nature and consequences must be clear, although the consequences need not be foreseeable with absolute certainty.

13.34 There are three aspects to this: there must be a "law"; it must be adequately accessible to the public; and it must be sufficiently precise to enable citizens to regulate their conduct and to provide appropriate guidance to those who apply the law.[27]

13.35 Although the CIBS Act does not expressly permit familial searching, this does not prevent a finding that it is prescribed by law.

13.36 The Court of Appeal in *New Health v South Taranaki District Council* held that the "prescribed by law" test is met if the relevant limitation is authorised by statute or is imposed pursuant to a statutory discretionary power.[28] The Court went on to say:[29]

> In the first case, it is necessary to examine the legislation to ascertain whether there is a justified limitation on the protected right. In the second, the focus is on the order or decision made pursuant to that discretion.

13.37 On appeal to the Supreme Court, the issue was discussed again.[30] O'Regan and Ellen France JJ concluded that the Court of Appeal was correct in their approach to "prescribed by law" for NZBORA:[31]

> The Court of Appeal concluded the LGA [Local Government Act] 2002 and the Health Act, at least by necessary implication, clearly authorised (but did not compel) the fluoridation of drinking water…. We have already set out our conclusion that the Council and other local authorities have a power to fluoridate drinking water under the LGA 2002 and the Health Act. We agree with the Court of Appeal that these legislative provisions provide authorisation for the fluoridation of water which is sufficient to meet the requirement that a limitation be "prescribed by law' for the purpose of s 5.

13.38 Glazebrook and William Young JJ did not discuss the issue because their judgments took different routes. However, Elias CJ appeared to disagree with O'Regan and Ellen France JJ's approach.[32] The Chief Justice doubted whether general discretionary powers conferred upon NZBORA actors are "justifiable as a limitation of rights 'prescribed by law' without more".[33]

13.39 *Reekers* confirmed that familial searching is a lawful form of "forensic comparison" under the CIBS Act, and the practice is regulated by the Protocol established between Police

27 Andrew Butler and Petra Butler *The New Zealand Bill of Rights Act: A Commentary* (2nd ed, LexisNexis, Wellington, 2015) at 203–204.

28 New Health New Zealand Inc v South Taranaki District Council [2016] NZCA 462, [2017] 2 NZLR 13 at [105]–[108]. The Court of Appeal adopted the reasoning of two leading Canadian cases: *Wynberg v Ontario* (2006) 269 DLR (4th) 435 (ONCA) and *Slaight Communications Inc v Davidson* [1989] 1 SCR 1038. In both of these cases, the Courts observed that an approach to the "prescribed by law" standard focusing solely on whether the limitation was imposed by statute, regulation or the common law would be overly restricted. A consequence of this approach would be that the Government would be forced to enshrine in legislation all actions or powers that might conceivably infringe a protected right in order to fulfil the "prescribed by law" standard.

29 At [106].

30 *New Health New Zealand Incorporated v South Taranaki District Council* [2018] NZSC 59.

31 *New Health New Zealand Incorporated v South Taranaki District Council* [2018] NZSC 59 at [111].

32 The Chief Justice only indirectly commented on this issue as she found that the legislation did not confer upon the Council a power to fluoridate water and consequently did not need to analyse whether such a power is inconsistent with the New Zealand Bill of Rights Act 1990: *New Health New Zealand Incorporated v South Taranaki District Council* [2018] NZSC 59 at [222].

33 *New Health New Zealand Incorporated v South Taranaki District Council* [2018] NZSC 59 at [222].

and ESR. Further, on the approach taken by the Court of Appeal and accepted by O'Regan and Ellen France JJ in the Supreme Court in *New Health*, familial searching can arguably be construed as the exercise of a broad discretionary power conferred by statute to conduct forensic comparisons in the course of criminal investigations.

13.40 If this is the case, questions arise as to what reasonable limits are placed on its use and how those limits are enforced – particularly with the current lack of accessibility of the Protocol, which is not published by Police or ESR.[34] As Police has acknowledged, unconscious bias can lead to disparities in the way discretion is exercised.[35] While there are initiatives under way to address this,[36] as the Court of Appeal has noted in a 2017 decision, the disparities in criminal justice outcomes remain and have in some ways become worse.[37] There is a risk, therefore, that exercise of this discretion could have a disproportionate impact on Māori. This should not be taken lightly.

13.41 We also have concerns about the precision of the Protocol. The ordinary meaning of the phrase "serious offence" is not immediately obvious. Police appears to take a very narrow approach, focusing on cases involving particularly serious sexual offending or death. However, certain violent and property offences could also be viewed as serious. Police and ESR may have a settled understanding of what "serious" means in this context, but that is not evident from reading the Protocol.

13.42 From a law reform perspective, it would be preferable if the rules governing the use of familial searching were more accessible, subject to oversight and auditing and assessed for consistency with NZBORA and the Treaty of Waitangi.

Is familial searching consistent with section 21 of NZBORA?

13.43 Familial searching also has the potential to conflict with section 21 of NZBORA, which provides that everyone has the right to be secure against unreasonable search or seizure.

13.44 A search or seizure can be unreasonable either because it occurred at all or because of how it was carried out.[38] Currently, when a biological sample is taken from an individual for the known person databank, they are not given any information about familial searching. None of the notification or consent forms mention that the person's DNA profile could be used to identify one of their family members as a potential suspect in a criminal investigation.[39] This is particularly problematic where the person has provided a databank sample by consent. In that context, if a person is not told that their DNA profile may be used to identify a family member as a potential suspect, it seems unreasonable

34 For those who know where to look, the Protocol is an appendix to the academic text book: Nessa Lynch and Liz Campbell *The Collection and Retention of DNA from Suspects in New Zealand* (Victoria University Press, Wellington, 2015).

35 Interview with Mike Bush, Commissioner of Police (Lisa Owen, The Nation, 28 November 2015) transcript provided by Scoop Independent News (Wellington). See also Nicholas Jones "Police Commissioner: Racial profiling perception 'concern we need to address'" *The New Zealand Herald* (online ed, Auckland, 8 June 2018).

36 Reducing Māori reoffending rates and building Māori confidence and trust in Police are currently important goals for Police. See New Zealand Police and the Māori Focus Forum *The Turning of the Tide: A Whānau Ora Crime and Crash Prevention Strategy 2012-2013–2017-2018* (December 2012); and New Zealand Police *Four Year Plan 2016-2017–2019-2020* (May 2016). Commitment to Māori and the Treaty is one of Police's seven core values: New Zealand Police *Annual Report 2016-2017* (November 2017) at 9.

37 *Kearns v R* [2017] NZCA 51, [2017] 2 NZLR 835 at [25].

38 *Hamed v R* [2011] NZSC 101, [2012] 2 NZLR 305.

39 See Chapters 8 and 11 in which we discuss what information is given to individuals when their DNA sample is taken.

for their DNA profile to then be used in this way. In fact, in the absence of this information, there is some doubt as to whether such a person's consent could truly be described as "informed".

Consistency with the Treaty of Waitangi

13.45 In addition to issues of consistency with NZBORA, familial searching raises concerns with consistency with the Treaty – in particular, the principle of equity, which reinforces the Crown's obligation to act fairly towards Māori and non-Māori. The Waitangi Tribunal states that this complements the duty of active protection and can require positive intervention to address disparities.[40]

13.46 The Treaty also reinforces the Crown's obligation to accommodate tikanga to the fullest extent possible in the exercise of kāwanatanga.

Privacy concerns

13.47 Familial searching also raises more general privacy concerns. Those concerns arise for the individual whose DNA profile is on the known person databank as well as for any family member who is investigated by Police because of that profile.

13.48 With familial searching, the individual whose DNA profile leads Police to a family member arguably becomes a kind of "genetic informant".[41] It also makes that person part of an investigation in which they would not otherwise have been involved.

13.49 The person may have chosen not to inform their family members about past criminal offending or their involvement in previous investigations by Police. Although a conviction is technically public information, a person may wish to keep that information from their family. However, that information may be exposed by Police efforts to contact a family member after discovering a near match on the databank.[42]

13.50 Familial searches and associated investigations could also reveal previously unknown personal information about genetic relationships. For example, familial searching could reveal that a person has a biological child, sibling or parent they were previously unaware of. Similarly, the search could show that two people who thought they had a biological relationship (for example, a father and son) are not genetically related.

13.51 These concerns are heightened when we consider two other matters:

(a) At present, over half of the profiles on the known person databank were originally provided by consent. As explained above, these people were not told about the possibility of familial searching at the time that consent was given.

(b) Some of the people who have a DNA profile on the known person databank will not have been convicted of any offending.[43] It is particularly hard to justify the additional privacy intrusion in relation to this group.

40 Waitangi Tribunal *Tū Mai Te Rangi! The Report on the Crown and Disproportionate Reoffending Rates* (Wai 2540, 2017) at [4.1.3].

41 Sonia Sutter "All in the Family: Privacy and DNA Familial Searching" (2010) 23 Harv J L & Tech 309 at 329–349.

42 Laura Thomas "Nothing to Hide, Something to Fear? The Use of Partial DNA Matching in Criminal Investigations" (2006) 17 JLIS 76 at 91.

43 For example, people who were required to provide a sample at the time of arrest/intent to charge under Part 2B and who are still awaiting trial.

13.52 Familial searching also raises a specific privacy issue for the relatives of the "genetic informant". Essentially, this is the issue of discrimination described above with reference to section 19 of NZBORA. Even if discrimination can be legally justified in terms of section 5 of NZBORA, there may still be a wider social concern. As one commentator puts it, familial searching:[44]

> puts someone in jeopardy of investigation simply because his brother committed a crime… that's the sins of the father being visited on the son… [it is] contrary to the whole idea of the criminal justice system.

13.53 This is the idea of suspicion based on family ties.[45] Relatives may become persons of interest simply because of a genetic relationship. Familial searching impacts on those with 'bad' relatives while ignoring those with 'good' relatives.[46] Such concerns where recognised as early as 1995, when the United States of America National Academy of Sciences stated:[47]

> The ability of DNA to recognise relatedness poses a novel privacy issue for DNA databanks… DNA databanks have the ability to point not just to individuals but to entire families – including relatives who have committed no crime. Clearly, this poses serious issues of privacy and fairness.

13.54 The Nuffield Council on Bioethics[48] observed in 2007 that, even if no specific harm results from a breach in privacy, "the unauthorised use of such sensitive personal information might be seen as undermining the inherent dignity of human beings".[49]

Consistency with tikanga

13.55 Whanaungatanga broadly refers to the notion of collective obligation within a kin group whereby the collective is entitled to the support of its individuals and, in turn, individuals are entitled to the support of the collective.[50] Originally, it referred to blood relationships but now it is used more widely to include, when appropriate, other kin-like relationships.[51] Use of familial searching could undermine whanaungatanga. That is because, as with DNA phenotyping, the actions of one person could bring other members of the family to Police attention.

13.56 Limiting the use of familial searching to a small number of cases also minimises the risk of damage to social cohesion and compromising duties of whanaungatanga.

44 Richard Willing "Suspects Get Snared by a Relative's DNA" *USA Today* (online ed, Virginia, 7 June 2005).

45 Henry Greely and others "Family Ties: The Use of DNA Offender Databases to Catch Offenders' Kin" (2006) 34 J L Med & Ethics 248 at 256.

46 Alexandra Flaus "Familial Searches and the New Zealand DNA Profile Databank: The Thin Edge of the Genetic Wedge?" (LLB (Hons) Dissertation, University of Otago, 2013) at 20.

47 Committee on DNA Technology in Forensic Science *DNA Technology in Forensic Science* (National Academies Press, Washington DC, January 1992) at 86–87.

48 A United Kingdom-based independent charitable body that examines and reports on bioethical issues.

49 Nuffield Council on Bioethics *The forensic use of bioinformation; ethical issues* (September 2007) at 33. The Nuffield Council on Bioethics is an independent body that examines and reports on ethical issues in biology and medicine.

50 See discussion in Chapter 2.

51 Law Commission *Māori Custom and Values in New Zealand Law* (NZLC SP9, 2001) at [130]. See Māmari Stephens "Fires Still Burning? Māori Jurisprudence and Human Rights Protection in Aotearoa New Zealand" in Kris Gledhill, Margaret Bedggood and Ian McIntosh (eds) *International Human Rights Law in Aotearoa New Zealand* (Thomson Reuters, Wellington, 2017) 99 at [3.3.02], which suggests that the broader base of whanaungatanga has enabled the development of a sense of *civic* obligations whereby Māori individuals and collectives began to accept that decisions could be made for and on behalf of their groups outside of immediate kin-based connections.

OVERSEAS APPROACHES TO FAMILIAL SEARCHING

United Kingdom

13.57 It is slightly unclear what the current approach taken in the United Kingdom is. In 2002, the United Kingdom became the first country to use familial searching. Like New Zealand, there is no legislation that specifically mandates its use. As a result, familial searching is governed by internal policies that are not publicly available, and from the information that is publicly available, there appears to be conflicting information as to the current approach:

(a) The 2016–2017 Annual Report of the Forensic Information National DNA Strategy Board states that it must give approval prior to a familial search being undertaken. It notes that, due to cost and staffing, searches are only conducted in the "most serious of crimes".[52]

(b) The 2016–2017 Annual Report of the United Kingdom National DNA Database Ethics Group[53] notes that a new policy for undertaking familial searching has been implemented. Under the new policy, the National DNA Database Delivery Unit within the Home Office[54] assesses each familial search request to ensure compliance with the policy.[55] Exceptional requests that do not comply may be referred to the Ethics Group and Biometrics Commissioner to assess if they are proportionate.[56]

United States

13.58 In the United States, each state regulates its own DNA profile databank.[57] Currently, 10 states undertake familial searching on their DNA profile databanks: Arkansas, California, Colorado, Florida, Michigan, Texas, Utah, Virginia, Wisconsin and Wyoming.[58] Several of these states require the general approval of state officials to undertake a familial search. For example, California's familial searching programme requires the approval of the state Attorney General. Other jurisdictions have implemented familial searching based on an administrative determination or laboratory policy. Two other jurisdictions, Maryland and the District of Columbia, expressly prohibit the use of familial searching in their laws.[59]

52 National DNA Database Strategy Board *Annual Report 2016–2017* (Home Office, July 2018). The report notes that 22 searches were conducted in the 2016–2017 year.

53 As of July 2017, this was renamed the Biometrics and Forensics Ethics Group.

54 This is a department within the Home Office responsible for overseeing the running of the National DNA Database.

55 National DNA Database Ethics Group *Annual Report 2016* (Home Office, 2016) at 11. The Ethics Board was invited by the FIND Strategy Board to provide ethical advice on the familial searching policy.

56 National DNA Database Ethics Group *Annual Report 2016* (Home Office, 2016) at 12. The *Minutes of the National DNA Database Ethics Group 13 September 2016* (Home Office, NDNADEG 13092016, 13 September 2016) note at [9.4]–[9.5]:

> Exceptional cases would be assessed on the basis of their merits using the principles of the policy as to whether the search would be appropriate and proportionate. If the NDU thought that the search would be pushing the boundaries of the policy from an ethical view-point then the Ethics Group and Biometrics Commissioner would be asked whether the search would be proportionate. Members of the Ethics Group stressed that in relation to exceptional cases it was important to clarify the principles that would be applied when these cases were assessed and whether the police forces would provide sufficient information to allow for the legal, ethical and moral basis of the search to be undertaken. It was suggested that the principles that should be applied to exceptional cases ought to be determined and at least two individuals should independently apply these principles to each exceptional case.

57 Sonia Sutter "All in the Family: Privacy and DNA Familial Searching" (2010) 23 Harv J L & Tech 309 at 315.

58 Federal Bureau of Investigation "Combined DNA Index System (CODIS) Overview" (27 April 2018) <www.fbi.gov/>.

59 Federal Bureau of Investigation "Combined DNA Index System (CODIS) Overview" (27 April 2018) <www.fbi.gov/>.

13.59 The issue of familial searching has been considered at a federal level, and a Bill was introduced in 2011 to make it permissible. However, the Bill was ultimately unsuccessful.[60]

Australia

13.60 In Australia, legislation regarding the use of DNA in criminal investigations exists at both a federal level and at a state/territory level. Australia is in a similar position to New Zealand in that none of the current legislation (state or federal) expressly permits or prohibits familial searching, and a broad interpretation of the legislation has been given to permit familial searching. Australia has a national policy that governs the use of familial searching across states and territories: *The National Policy for Cross-Jurisdictional Familial DNA Searching for the Investigation of Crime in Australia*.

13.61 Local familial DNA searching polices also exist within each jurisdiction.[61] Aspects of these policies are found in the publicly available 2018 *Familial DNA Searching Factsheet*.[62] Similar to the approach taken in New Zealand, the Australian approach to familial searching is conservative, and familial searching is only conducted after all other avenues have been explored.

Canada

13.62 In Canada, familial searching is prohibited by federal legislation. The DNA Identification Act SC 1998 provides that new DNA profiles can be compared with those already in the databank, and any "matches" may be communicated to the appropriate laboratory or law enforcement agency.[63] This legislation has been interpreted as expressly prohibiting familial searching.[64] Familial searching is, however, done at the regional level by forensic laboratories since they are not subject to the DNA Identification Act.[65]

60 Utilizing DNA Technology to Solve Cold Cases Act 2011, HR3361, 112th Cong (2012). To evaluate the feasibility of familial searching at the national level, the FBI's CODIS Unit sought input from the Scientific Working Group on DNA Analysis Methods (SWGDAM) on specific questions relating to the efficiency of kinship matching compared to counting shared alleles, false positives and optimal database size and optimal number of ranked candidates for the 10 million DNA profile database. SWGDAM provided the CODIS Unit with the following recommendations: (1) the use of kinship LRs is the preferred method for familial searching; (2) ranked lists should be reviewed since the true relative is not always ranked as the #1 candidate and additional filters should be used to reduce the number of false positives; and (3) since it is difficult to establish a threshold ranking for review of a ranked list when searching a database of over 10 million records when additional filters of metadata, geography and Y-STR testing may not be available, routine familial searching at the national level is not recommended at this time: See Federal Bureau of Investigation "Combined DNA Index System (CODIS) Overview" (27 April 2018) <www.fbi.gov/>.

61 National Institute of Forensic Science "Publications" Australian and New Zealand Policing Advisory Agency <www.anzpaa.org.au/nifs>.

62 National Institute of Forensic Science "Publications" Australian and New Zealand Policing Advisory Agency <www.anzpaa.org.au/nifs>.

63 DNA Identification Act SC 1998 c 37, ss 5.5 and 6(1).

64 Standing Senate Committee on Legal and Constitutional Affairs *Public Protection, Privacy and the Search for Balance: A Statutory Review of the DNA Identification Act* (Canadian Senate, June 2010) at 62; Amelia Bellamy-Royds and Sonya Norris 'New Frontiers in Forensic DNA Analysis: International Practices and Implications for Canada' (Library of Parliament, 3 March 2009) at 12; Rawlson King "RCMP currently examining use of DNA familial searching" (12 January 2017) Biometric Update <www.biometricupdate.com/>; and Aedan Helmer "Familial DNA searches could help crack Canadian cold cases" *Ottawa Citizen* (online ed, Ottawa, 8 January 2017).

65 Standing Senate Committee on Legal and Constitutional Affairs *Public Protection, Privacy and the Search for Balance: A Statutory Review of the DNA Identification Act* (Canadian Senate, June 2010) at 62.

OPTIONS FOR REFORM

Publish the Protocol that governs familial searching

13.63 If familial searching is to continue to be governed primarily by the Protocol agreed between Police and ESR, we consider it needs to be more accessible. The Protocol could be made publicly available and could define what qualifies as a "serious offence". The Protocol could also be given to those providing biological samples for the databank. This would promote consistency with section 21 of NZBORA, particularly in cases where databank samples are being provided by consent.[66]

Legislative reform

13.64 We consider that, like forensic DNA phenotyping, familial searching is an investigative tool that impacts upon human rights, Treaty rights, privacy and tikanga, and its use is potentially controversial. Therefore, we consider that it would be best for Parliament to decide whether to prohibit or permit familial searching.[67]

13.65 One reform option that would avoid the need for this decision to be made is if Parliament decided to establish a universal databank, discussed in Chapter 11. A universal databank would make familial searching unnecessary, as everyone would have a profile on the databank.

13.66 However, as we conclude in Chapter 11, we have significant reservations about a universal databank. It is therefore worth exploring other broad options for legislative reform: a complete ban on familial searching or a permissive statutory regime. The issue with a complete ban is that it may result in some serious cases remaining unresolved when all other investigative leads are absent or have been exhausted. A better approach may be to develop a permissive but conservative statutory regime.[68] If this option is preferred, the legislation should expressly permit familial searching but also specify the parameters of its use.

13.67 It would also be useful to codify any mechanism for the approval of familial searching in any particular case. Approval could take a variety of forms: an internal Police process (with a reporting requirement); an application to a judge for a specific order;[69] or approval by an independent oversight body.

13.68 In any case, an independent oversight body could also be useful. Such a body could be responsible for reviewing and approving the familial searching protocol between Police and ESR and for monitoring the use of familial searching if there is a legislative regime to ensure consistency with NZBORA and the Treaty of Waitangi and consider tikanga and privacy issues. This would require involvement from relevant groups impacted by familial searching, in particular Māori, to ensure familial searching was conducted in a way that is respectful to the relationships it impacts.

66 However, as we explained in Chapter 11, we do not think that many samples (if any) should be obtained for the known person databank by consent in the future.

67 The Legislation Design and Advisory Committee *Legislation Guidelines* (March 2018) at 101. See a similar discussion on Parliament directing the use of DNA phenotyping in Chapter 6.

68 Alexandra Flaus "Familial Searches and the New Zealand DNA Profile Databank: The Thin Edge of the Genetic Wedge?" (LLB (Hons) Dissertation, University of Otago, 2013) at 46.

69 We have not explored the search warrant route as an option as we consider there are issues with the reasonable grounds requirements in section 6 of the Search and Surveillance Act 2012.

Q32 What concerns do you have, if any, about the use of familial searching in criminal investigations?

Q33 How do you think familial searching should be regulated in New Zealand?

Part D

Overarching issues

CHAPTER 14

Retention of samples and profiles

INTRODUCTION

14.1 Throughout this paper, we have discussed how New Zealand Police and the Institute of Environmental Science and Research (ESR) obtain biological samples and generate DNA profiles that may be used in criminal investigations. In Chapters 10, 11 and 12, we explained how these DNA profiles may end up on the Crime Sample Databank (CSD) or the known person databank. In this chapter, we explore the issue of retention.

14.2 Many of the same issues that arise when obtaining biological samples and generating DNA profiles continue into the retention phase. For instance, the intrusion on information privacy does not end when a sample is obtained, analysed and the profile generated. It continues as long as the sample and profile are retained.

14.3 We do not repeat these concerns in this chapter. We focus instead on the issues that only arise as a result of retention, such as how long samples and profiles should be retained, whether there should be oversight of storage and destruction and how tikanga could inform the process of retention and disposal of samples.

14.4 We first consider the retention of biological samples and then the retention of DNA profiles. Possible options for reform are discussed throughout.

The distinction between biological samples and DNA profiles

14.5 When discussing issues of retention, it is important to distinguish between biological samples and DNA profiles.

14.6 A biological sample is any biological material that has been collected by Police for the purpose of scientifically analysing the DNA. That sample may be obtained from a crime scene or from a known person. Biological samples that may be obtained from crime scenes – crime scene samples – include blood, semen, saliva or skin cells (which can be collected using swabs) or items such as bottles, cigarette butts, clothing and chewing gum that may have biological samples on/in them (for instance, bodily fluids or skin cells).

14.7 Biological samples from known persons (collected for a specific case or a databank) are usually obtained using a buccal (mouth) swab. On rare occasions, they may be obtained as blood (fingerprick or venous sample).

14.8 The biological samples contain DNA, which in turn contains a wealth of genetic information about the individual it is from.

14.9 By contrast, a DNA profile – at present – is the limited amount of information that is generated from a biological sample. It generally consists of a series of between 10 and 46 numbers and an indication of the person's sex (usually an XX or an XY). These profiles are almost unique and are highly effective for distinguishing between different individuals.[1]

BIOLOGICAL SAMPLES

14.10 Currently, almost all biological samples obtained by Police from known persons are sent to ESR for analysis, after which ESR destroys the samples in accordance with the statutory requirements (see below). Any biological samples that are not sent are destroyed by Police upon the decision not to analyse them.[2]

14.11 Where Police sends crime scene samples or items containing (or comprising) biological samples, ESR will retain any remaining part of the crime scene sample after analysis. However, with larger items, ESR might only extract a smaller portion for analysis, returning the balance of the item to Police.[3] Samples that Police does not send to ESR are retained in police custody until they are no required for investigative purposes, at which point they are destroyed.

Retention periods

14.12 Table 1 sets out the retention periods for the different types of biological samples that may be collected by Police during criminal investigations.

14.13 With one exception, samples obtained from children, young persons and adults are all treated the same. The exception is samples obtained under Part 2A of the Criminal Investigations (Bodily Samples) Act 1995 (CIBS Act). Under that Part, samples can only be obtained from children and, in particular, children who cannot be prosecuted for an offence.[4] As can be seen in Table 1 below, there are special rules regarding retention of those samples.

14.14 At the end of the retention period, current practice is that ESR will dispose of the biological sample in a biohazard waste bin. The company responsible for disposing of the biohazard waste then uses a process of rotoclaving (heating the waste to 140 degrees Celsius and grinding it down) before disposing of the remains in a landfill. This is seen as preferable to burning, as burning may be detrimental to the environment.[5]

1 See Chapter 3 for a more detailed discussion.

2 This may be due to a decision being made by a supervisor not to send the sample for analysis or if a sample is taken in respect of the young person but then an Intention to Charge Family Group Conference decides that the young person is not to be charged. To give a sense of the figures, over the last eight years, a DNA profile has been generated from 91 per cent of the biological samples that were obtained under Part 2B. In relation to the remaining 9 per cent, the sample will either not have been sent to ESR for analysis or there will have been insufficient DNA in the sample to enable ESR to generate a DNA profile.

3 For instance, if Police submits a blood-stained t-shirt to ESR for analysis, ESR may cut out a portion of the t-shirt in order to analyse the blood. If any of that portion remains after analysis, ESR will retain this. However, ESR will return the t-shirt from which the portion was cut. This is in accordance with ESR's return policy, which, broadly speaking, is to return exhibits to Police.

4 See Chapter 8 for further discussion of Part 2A samples.

5 Maui Hudson and others "The Impact of Māori Cultural Values on Forensic Science Practice in New Zealand" (2008) 53 JFS 380 at 3.

14.15 ESR reports to Police when it has completed the destruction of a biological sample from a known person. The person from whom the sample was obtained is not notified.

Table 1: Retention periods for biological samples

SAMPLE TYPE	HOW LONG IS A SAMPLE RETAINED?	STATUTORY PROVISION
Sample obtained for casework		
Crime scene sample	Indefinitely[6]	Search and Surveillance Act 2012, sections 149 and 150
Suspect sample (by consent or compulsion under Part 2 CIBS Act – see Chapter 8)	Until either:[7] - 24 months has passed and no charge has been filed (unless this period is extended by a judge); or - if a charge is filed within that time, the court proceedings have concluded.[8] After either of these events, the sample must be destroyed "as soon as practicable".[9]	CIBS Act, sections 60(1)(d), (e),(f),(2) and (2A) and 61
Suspect sample (indirect collection) – see Chapter 9	Until it is no longer required for investigative or evidential purposes.	Search and Surveillance Act 2012, sections 149 and 150
Elimination sample (see Chapter 8)	For 24 months. At that point, Police reviews whether its retention is still required.	None
Non-prosecutable child suspect sample (Part 2A CIBS Act)	Until the forensic comparison results are received by Police and either: - the results indicate the suspect was not involved in the offending; or - Police makes an application for a care and protection order based on the results within 60 days and that application is determined by the Family Court; or - Police does not make an application for a care and protection order within 60 days. After any of these events the sample must be destroyed "as soon as practicable".	CIBS Act, sections 61A(a), (b) and (c)

6 Section 149 of the Search and Surveillance Act 2012 treats crime scene samples in the same way as all other evidential material. Such material must only be retained by Police while it is necessary for "evidential or investigative purposes". Police has interpreted this broadly in relation to crime scene samples as we discuss below.

7 The charge may relate to the original offence for which the sample was collected or a "related offence". The proceedings end when either the charge is withdrawn, the person is acquitted or the person is convicted and the appeal period expires.

8 The proceedings end when the charge is withdrawn, the person is acquitted or the person is convicted and the appeal period expires.

9 Pursuant to section 60(2A), if the person is convicted of an offence for which the sample was obtained under Part 2 or a related offence, the sample is "retained only for as long as necessary to enable a DNA profile to be obtained from the sample, and is then destroyed". The DNA profile from that sample is then transferred to the DPD.

SAMPLE TYPE	HOW LONG IS A SAMPLE RETAINED?	STATUTORY PROVISION
Sample obtained for the known person databank		
Temporary Databank sample (Part 2B CIBS Act)	It must be "destroyed as soon as practicable after a DNA profile is obtained".[10]	CIBS Act, section 60A(2)
Databank consent sample (Part 3 CIBS Act)	It must be "retained only as long as is necessary to enable a DNA profile to be obtained"[11]and then destroyed. Unless the person withdraws their consent and is not convicted of a qualifying offence prior to the sample being destroyed, it must be destroyed "as soon as practicable"[12]	CIBS Act, sections 36(1) and (2) and 62(2)
Databank compulsion notice (Part 3 CIBS Act)	It must be "retained only as long as is necessary to enable a DNA profile to be obtained" and then destroyed.[13] Unless the person's conviction is quashed prior to the sample being destroyed, it must be destroyed "as soon as practicable".[14]	CIBS Act, sections 62(2) and (4)
Dual sample (Parts 2 and 3 CIBS Act)	This is treated as a suspect sample for the purpose of retention.[15]	Legislation unclear

ISSUES WITH BIOLOGICAL SAMPLES

14.16 Biological samples are not the same as other property or personal information. They are unique in terms of the sheer volume of information they contain and their cultural and spiritual significance.

14.17 In New Zealand, that unique nature is recognised in the Human Tissue Act 2008. It regulates the collection of any biological material containing human cells from dead bodies and, in some circumstances, from living persons. It recognises that such material must be collected and used in a way that recognises and respects the autonomy and dignity of individuals as well as cultural and spiritual needs.[16] The Act defines "use" to

10 Police policy is to destroy samples after two months – presumably to align with the profile destruction requirement. Police Manual *DNA Sampling* at 53. ESR has advised that its practice is to destroy after three months.

11 Criminal Investigations (Bodily Samples) Act 1995, s 62(2).

12 This is the requirement in the legislation: see the Criminal Investigations (Bodily Samples) Act 1995, s 36(1). However, if a sample is destroyed as soon as a profile is obtained (Criminal Investigations (Bodily Samples) Act 1995, s62(2)), there may not be any sample to destroy at the point of any withdrawal of consent.

13 Criminal Investigations (Bodily Samples) Act 1995, s 62(2). ESR advises that its practice is to destroy after three months.

14 As with databank consent samples, this is currently the requirement in the legislation.

15 We understand ESR's policy is to receive the dual sample as if it was a suspect sample for the purpose of generating the profile. The profile is then retained on the known person databank as well as the specific case file.

16 Human Tissue Act 2008, s 3 (discussed further in Chapter 2). Section 18 of the Human Tissue Act 2008 states:

> A person collecting or using human tissue must take into account, so far as they are known to the person based on information available to the person in the circumstances, the cultural and spiritual needs, values, and beliefs of the immediate family of the individual whose tissue is collected or used.

include the storage and disposal of biological material.[17] This is relevant to any consideration of how biological samples obtained under the CIBS Act from known persons should be treated.

14.18 Guidance can also be found in the rules around the retention of evidence under the Search and Surveillance Act 2012, the information privacy principles and the principle of minimal intrusion underlying section 21 of the New Zealand Bill of Rights Act 1990 (NZBORA). The State must only retain a person's property and/or personal information for as long as is necessary to achieve the purpose for which it was originally obtained. This suggests that, as soon as a biological sample is no longer required for law enforcement purposes, it should be destroyed.

14.19 First, we consider issues that relate to all biological samples. We then discuss specific issues that relate to samples from known persons and then the specific issues that relate to crime scene samples.

Common issues

14.20 The first issue we have identified is around the autonomy, dignity and mana of the individuals whose samples are being retained. The second concerns consistency with tikanga in respect of retention and disposal of these samples. The third relates to oversight.

Autonomy, dignity and mana

14.21 There are several ways in which a biological sample may come into Police possession. If it is a crime scene sample, a person may have strong feelings about the collection process and associated events, depending on their involvement in the offence (for example, victim, family member of a victim, third party or offender).

14.22 A person may also have strong feelings about a biological sample they provided to Police – either for comparison to a crime scene profile or for uploading to the known person databank. There may be a particularly strong sense of a loss of autonomy, dignity or mana if the sample was obtained by compulsion as opposed to consent.

Option for reform

14.23 One way of restoring dignity or mana in this situation may be to give the person some input into what eventually happens to that sample. Some people may wish to have the sample returned to them, where possible, when it is no longer required for law enforcement purposes. Others may want it to be destroyed by ESR but may have views as to how that should be done or may want to be notified when it has happened. Some people may not have an opinion about what happens to their sample but nonetheless value the opportunity to have input.

14.24 Therefore, at the time a sample is obtained (or the source of a crime scene sample identified), an option would be for Police or ESR to provide the person with information regarding disposal of the sample and the options available for its possible return or notification of its destruction.

14.25 One drawback with this approach is that people are already provided with a considerable amount of information on being sampled,[18] and adding another piece of information may

[17] Human Tissue Act 2008, s 6 definition of "use", paras (a)(v)–(vi).

contribute to rather than assist in addressing, any power imbalance or feeling of being overwhelmed and unable to make meaningful informed consent about what ultimately happens to their sample.

14.26 We also acknowledge that there would be an administrative cost associated with this option. For instance, it could be difficult to locate appropriate addresses for individuals to notify them of destruction. This may be particularly problematic in relation to crime scene samples, which may need to be retained for a long period of time prior to destruction, if they are destroyed at all. (We discuss this later in the chapter.) This could be alleviated to some extent by only placing an obligation on Police and ESR to take "reasonable steps" to notify. As an alternative option, the default position could be that samples are destroyed in a biohazard bin without notification unless, at the time the sample is obtained, the person requests to be notified of destruction.

Tikanga Māori

14.27 For Māori, the human body – and blood in particular – is considered tapu, and human tissue is a taonga.[19] This means that specific issues of tikanga arise first when samples are obtained (which we discussed in Chapters 8 and 11) and then with the retention and disposal of samples from known persons and crime scene samples. This is particularly so when a person dies, as traditionally, it is customary for that person to be buried – including any body parts or significant biological material that has been separated from them during life.[20]

14.28 The issue of death is less likely to arise with biological samples obtained from known people, as the samples are destroyed as soon as a profile is generated. However, crime scene samples may need to be retained for lengthy periods, increasing the chance that the person who is the source of the sample may die while the sample is still being retained by ESR on behalf of Police. It is therefore important to consider how samples might be retained but also returned or disposed of in a manner that takes tikanga into account.

14.29 Currently, there are no particular rules around retention and disposal of biological samples that take tikanga into account. ESR has done some work considering what appropriate cultural approaches might be, but these are not communicated to those being sampled or whose crime scene samples are held.[21]

18 See discussion on the complexity of information provided at the time of sampling in Chapters 8 and 11.

19 Hirini Moko Mead *Tikanga Māori: Living by Māori Values* (revised ed, Huia Publishers, Wellington, 2016) at 53–54; and Maui Hudson and others *Te Ara Tika: Guidelines for Māori Research Ethics – A framework for researchers and ethics committee members* (Health Research Council of New Zealand, 2010) at 15.

20 Maui Hudson and others "The Impact of Māori Cultural Values on Forensic Science Practice in New Zealand" (2008) 53 JFS 380 at 381.

21 Maui Hudson and others "The Impact of Māori Cultural Values on Forensic Science Practice in New Zealand" (2008) 53 JFS 380 at 382.

Options for reform

14.30 In the context of medical genetic research, biobanking guidelines have been developed to ensure that biological materials are collected from Māori participants and used in a manner that is consistent with tikanga. [22] The guidelines envisage a three-step process:[23]

- Te tuku i te taonga (sharing the gift) – this refers to the point in time when participants consent to their tissue/DNA/data being collected and stored. This is when a relationship is built between the participants and the researchers and a level of comfort and safety is established.
- Te hau o te taonga (the spirit of the gift) – this refers to the ongoing relationship between the participants and the researchers to ensure that there is a continuing sense of control. The researchers have kaitiakitanga (guardianship) obligations to ensure that the taonga is responsibly and respectfully taken care of.
- Te whakahoki i te taonga (return of the gift) – this refers to the point in time when the samples are no longer required and are disposed of and responsibility for looking after the gift is returned to the community. The guidelines note "often the actual tissue/DNA would not be able to be returned to participants/communities but a representation of those taonga in the form of reports or other information could be returned".

14.31 There is some difficulty in taking concepts that are developed in the context of the health sector and trying to apply them in the criminal justice context. In the health context, the focus is voluntary and informed consent to participation with the aim of benefiting individual or group health outcomes. In the criminal justice context, the strong societal interest in the prevention, detection and prosecution of crime means that individuals may have little or no choice in providing their DNA to Police. Consequently, the DNA is not generally given as a "gift", as envisaged in step one of the biobanking guidelines. However, in some respects, it may be possible to develop policies around the retention and disposal of biological samples that reflect steps two and three of the guidelines.

14.32 Step two requires participants to be given a sense of control. As noted above, this could be achieved by asking people to decide what will ultimately happen to their sample at the time it is taken (or when the source of the crime scene sample is identified). However, as noted in the previous section, this may not be the most appropriate time for these matters to be raised, especially as people need to be informed of a considerable amount of other information at the time of sampling.

14.33 Additional transparency around how and where ESR stores the biological samples may also help. As noted, this is an area where ESR has already undertaken considerable work

22 Maui Hudson and others *He Tangata Kei Tua: Guidelines for Biobanking with Māori* (Te Mata Hautū Taketake – Māori and Indigenous Governance Centre, Hamilton, October 2016). These guidelines build on the more general guidance for Māori research ethics provided in Te Ara Tika. The guidelines in Te Ara Tika are intended for ethics committee members addressing Māori ethical issues when making research decisions, particularly in the health sector. Pūtaiora Writing Group *Te Ara Tika: Guidelines for Māori Research Ethics – A framework for researchers and ethics committee members* (Health Research Council of New Zealand, 2010). We discuss these guidelines in Chapter 12.

23 Maui Hudson and others *He Tangata Kei Tua: Guidelines for Biobanking with Māori* (Te Mata Hautū Taketake – Māori and Indigenous Governance Centre, Hamilton, October 2016) at 14–18.

internally.[24] Legislative changes (such as formalising the role of the forensic provider and discussing disposal at the time of collection) could also support those initiatives.[25]

14.34 Step three of the guidelines requires that something should be returned to participants at the end of the process. This could be the sample itself (where possible and appropriate), notification that the sample has been destroyed, a report from an oversight body responsible for auditing destruction and/or more transparent reporting on the utility of the databanks, as discussed in Chapter 11.

14.35 We also consider that it would be appropriate for there to be some oversight to ensure that biological samples are being retained and disposed of in accordance with any agreed guidelines or rules. We discuss the role of an oversight body below.

Oversight

14.36 Under the CIBS Act, no one is to use or have access to any "bodily sample" obtained from a person, except for the purpose of deriving a DNA profile for storage on a databank.[26] It is an offence punishable by a term of imprisonment to contravene the section.[27] The CIBS Act also contains provisions around the destruction of samples (see Table 1).

14.37 However, these rules only apply to samples obtained from known persons under the CIBS Act, and therefore, elimination samples, samples obtained by indirect means[28] and crime scene samples are not covered.

14.38 Even with samples obtained from known persons under the CIBS Act, there is no statutory oversight mechanism to ensure destruction occurs or to ensure appropriate storage and security of samples during their retention. In addition, there are no rules requiring ESR or Police to notify people when destruction or disposal of samples has occurred.

14.39 Currently, ESR and Police both rely on their internal case management systems to identify when samples need to be destroyed and to ensure that this occurs. They also rely on their own management and internal auditing systems to ensure that samples are not inappropriately accessed and are otherwise stored securely.

Option for reform

14.40 We do not have particular concern that samples are being retained when they ought not to be or concern that samples or profiles are currently insecurely stored.

14.41 However, given the sensitivities concerning biological samples, the fact that there are no rules regarding retention or destruction of samples in some instances (nor notification requirements), we consider independent oversight may be warranted. The issue is one of transparency and reassurance as well as upholding the principles of rangatiratanga, equity and partnership under the Treaty of Waitangi.

24 Maui Hudson and others "The Impact of Māori Cultural Values on Forensic Science Practice in New Zealand" (2008) 53 JFS 380 at 382.

25 Formalisation of the forensic provider role is discussed in Chapter 7.

26 Criminal Investigations (Bodily Samples) Act 1995, ss 24S and 28.

27 Criminal Investigations (Bodily Samples) Act 1995, s 77(2). The maximum penalty is three years' imprisonment.

28 Such as analysing biological sample left in a public place, such as a coffee cup or cigarette butt. See Chapter 9.

14.42 In Chapter 15, we discuss oversight further and in particular what an independent oversight body might look like and the functions it would perform. We consider that Māori should have a central role on any oversight body.

Retention of samples from known persons

14.43 One issue arises just in respect of the retention of samples from known persons. This relates to lengthy retention of some samples obtained in the context of casework.

14.44 As Table 1 illustrates, there is inconsistency in the length of retention times for samples from known persons. The general rule is that these samples are destroyed as soon as practicable after the profile is obtained. That seems sensible and aligns with the legal principles described above.

14.45 However, destruction is not immediate for samples obtained in the casework context, and various different rules apply. Elimination samples and, in some instances, suspect samples (if no charge has been filed) may be retained for 24 months or more. The rationale for this difference seems to be that the casework samples may be required for investigative or evidential purposes until charges are filed and then, if filed, until the conclusion of any criminal proceedings, but we question whether that is necessary. Often the DNA profile would be sufficient for those purposes. The only benefit of retaining the actual sample is that it could be reanalysed. However, Police advice is that this rarely occurs. Furthermore, if a defendant was concerned about the original forensic comparison process and wanted it conducted again, they could simply provide a second suspect sample for analysis. This would be a better check on the original forensic comparison.

14.46 In certain cases, there may be justification for Police to hold on to elimination samples and samples from cleared suspects. Take, for example, a bar brawl that results in a serious assault. Person A may be on trial for the assault. Persons B and C may have been cleared of any wrongdoing after they provided elimination or suspect samples. At trial, Person A may attempt to blame Persons B and C for the assault and may argue that the original forensic comparisons were flawed. If Persons B and C refuse to provide second samples, the Crown may not be able to disprove their involvement.

14.47 The 2009 amendments to the CIBS Act extended the retention period for suspect samples. Prior to 2009, these samples could only be retained for 12 months, unless charges were filed. A judge could extend that time period if there was still good cause to suspect the person of the offending, a good reason for not yet charging them and an investigative need to retain the sample. The 2009 amendment changed the initial retention period to 24 months. In addition, it allowed a judge to grant an extension if there was an investigative need to retain the suspect sample – even if the person was no longer suspected of the offending.

14.48 At the time, the (then) Privacy Commissioner voiced concerns about this amendment. In her submission to the select committee, she stated:[29]

> I do not support the proposal to retain samples and identifying information from cleared suspects for two years, as opposed to the current 12 month period. The automatic retention of information and genetic material relating to innocent people for this length of time is

[29] Privacy Commissioner "Submission to the Justice and Electoral Committee on the Criminal Investigations (Bodily Samples) Amendment Bill 2009" (6 April 2009) at [1.12].

excessive and disproportionate. Where extended retention is necessary for a particular investigation, application can be made to the Court for permission as is currently the case.

14.49 We share the Privacy Commissioner's concerns.

Options for reform

14.50 The simplest option to address this issue would be to have a general rule applicable to all biological samples obtained from known persons (whether they are taken for casework or the databank) that the sample must be disposed of as soon as practicable after a DNA profile is obtained.

14.51 As an exception to the rule, a judge could order that a suspect or elimination sample may be retained for up to 12–24 months if there were a case-specific need to do so. If it was felt this option did not give Police sufficient time to establish such a need, an alternative could be to have an automatic retention period of 6–12 months for all samples obtained from known persons in relation to specific cases. At the end of that period, any sample would need to be disposed of unless a police officer applied for and obtained an extension from a judge.

Retention of crime scene samples

14.52 The retention of crime scene samples raises very different issues to the retention of samples from known persons as it is not governed by the CIBS Act. It is instead primarily dealt with in the Search and Surveillance Act 2012. Under that Act, such samples are treated in the same way as any other evidence gathered during the course of an investigation.[30]

14.53 The general rule in the Search and Surveillance Act is that all evidential material must either be returned to its owner or disposed of once it is "not required for investigative or evidential purposes".[31] In relation to crime scene samples, Police has interpreted this phrase broadly and adopted a policy of retaining the samples indefinitely, even after an investigation has been closed on the basis that reanalysis of the sample may be required at a future date.

14.54 This policy sits uncomfortably with the wording of the statutory provision but reflects the important goal of ensuring that samples remain available for possible exoneration purposes.

Exoneration

14.55 Historically, DNA analysis has played a significant role in enabling post-conviction exonerations. The emergence of the Innocence Project Network, an international network of organisations dedicated to obtaining exonerations through DNA analysis, is testament to that fact. The Network has emphasised that such exonerations are not possible unless there is long-term retention of crime scene samples.[32]

30 See the discussion in Chapter 5.

31 Search and Surveillance Act 2012, s 150.

32 On its website, the Innocence Project recommends all DNA access law include provisions that "[r]equire state officials to properly preserve and catalogue biological evidence for as long as an individual is incarcerated or otherwise experiences any consequences of a potential wrongful conviction": Innocence Project "Access To Post-Conviction DNA Testing" <www.innocenceproject.org>.

14.56 There is, however, a tension between the information privacy principles (only retain personal information for as long as is necessary for the purpose for which it was collected) and tikanga (return the taonga) on one hand and considerations of efficiency on the other. Over time, the costs of securely storing all crime scene samples will add up.

14.57 To manage these competing tensions, other countries have opted to address the retention of crime scene samples in the following ways:[33]

- Statutory retention periods that depend on the seriousness of the offending. For example, in Arkansas, there is indefinite retention for violent offending, a 25-year retention for sex offending and a seven-year retention for other felony offending.[34]
- Statutory retention periods that depend on the sentence imposed for the offence. For example, in New South Wales, samples are only retained if a person is sentenced to imprisonment for 20 years or more or life and are retained only for the length of that sentence.[35]
- Retention periods set by judges at sentencing. For example, in Virginia, a sentencing judge can order the retention of crime scene samples for up to 15 years or longer at their discretion.[36]

Options for reform

14.58 The goal of retaining crime scene samples for potential exoneration purposes is important. However, from a law reform perspective, it would be preferable if the rules governing retention of crime scene samples were more accessible, subject to oversight and auditing, and assessed for consistency with NZBORA and the Treaty of Waitangi.

14.59 In terms of the underlying policy, the various approaches taken in other countries have both positive and negative aspects:

- Indefinite retention of all crime scene samples is the simplest option, but there are privacy, Treaty of Waitangi, tikanga and cost implications associated with this option.
- Statutory retention periods based on the seriousness of the offence are straight-forward and would reduce the disproportionate impact of retention on Māori, are also somewhat arbitrary.
- Retention based on sentence length may be difficult to apply in practice as the courts, Corrections, Police and ESR would all need to be involved in each case.
- Setting retention periods as part of sentencing could overcomplicate the sentencing process and possibly result in inconsistencies.

14.60 Without clear rules, none of these options would directly address tikanga concerns – such as the retention of a crime scene sample after a person's death. In this regard, shorter retention periods would lessen the likelihood that a person may die while the crime scene sample is still held by ESR on behalf of Police.

33 These examples came from the New South Wales Department of Attorney General and Justice *The DNA Review Panel: Review of Division 6 of Part 7 of the Crimes (Appeal and Review) Act 2001* (November 2013).

34 AR Code § 12.12.104.

35 Crimes (Appeal and Review) Act 2001 (NSW), s 96.

36 Va Code Ann § 19.2-270.4:1.

14.61 On the other hand, to promote the goal of exoneration, we consider that, at a minimum, long-term retention of crime scene samples should be required in serious cases and that the rules should be plainly stated in statute.

14.62 In our view, this could be achieved by amending the Search and Surveillance Act rather than including retention rules in any new CIBS Act. As noted in Chapter 5, the Search and Surveillance Act was designed to consolidate police search powers and procedures as much as possible, to promote consistency and to make the law more accessible. It already contains a general rule governing the retention of evidential material that police officers must apply, and it seems logical to clarify how those rules apply to crime scene samples.

14.63 This more transparent approach would also help to promote post-conviction access to crime scene samples.

Access to crime scene samples

14.64 At present if, a convicted person wants to have a crime scene sample reanalysed for the purpose of challenging their conviction, this must be arranged through Police. This is appropriate as Police has a statutory responsibility for law enforcement, which must include exploring exculpatory as well as inculpatory lines of inquiry.[37] However, there may be merit in having an independent third party involved in making these decisions as well.

Options for reform

14.65 One possible model would be to involve the courts as is done in New South Wales, where a statutory provision provides that a convicted person may apply to the Commissioner of Police to have a crime scene sample analysed or reanalysed. If the Commissioner declines, the convicted person may apply to the Supreme Court for an order requiring the Commissioner to comply.[38]

14.66 An alternative model would be the United Kingdom's approach, where the Criminal Cases Review Commission is empowered to arrange for crime scene samples to be analysed or reanalysed following an application from a convicted person to review their case.[39] This Commission is an independent organisation that was established to investigate suspected miscarriages of justice. Significantly, Parliament is already currently considering whether to establish a Criminal Cases Review Commission in New Zealand, partly based on the United Kingdom model.[40]

37 Policing Act 2008, s 9(c).

38 Crimes (Appeal and Review) Act 2001 (NSW), s 97. These provisions were strengthened when the NSW DNA Review Panel (which operated between 2007 and 2014) was abolished. The NSW DNA Review Panel had been tasked with: considering any application by an eligible convicted person (that is, a person convicted of an offence punishable by at least 20 years' imprisonment) to assess whether DNA evidence would affect that person's claim of innocence; arranging searches for, and DNA testing of, biological material; referring matters to the Court of Criminal Appeal for review of a person's conviction, where this is appropriate following receipt of DNA test results; and making reports and recommendations to the Minister regarding the use of DNA technology in assessing claims of innocence. The Panel was abolished in 2014 largely due to insufficient workload. See generally New South Wales Department of Attorney General and Justice *The DNA Review Panel: Review of Division 6 of Part 7 of the Crimes (Appeal and Review) Act 2001* (November 2013).

39 Criminal Cases Review Commission "What We Do" <https://ccrc.gov.uk/>. See also Criminal Appeal Act 1995 (UK), ss 17–21.

40 See Criminal Cases Review Commission Bill 2018 (106-1).

Q34 Do you think that a person should be able to choose to have their biological sample returned to them (as opposed to it being destroyed)?

Q35 What procedures do you think should surround the destruction of biological samples? Should people have a choice as to how it is done? Should people be notified when it has occurred?

Q36 Should an oversight body audit compliance with the rules around retention and destruction of biological samples and tikanga, ensure secure storage of samples and consider compliance consistency with tikanga?

Q37 Should suspect and elimination samples that are obtained from known persons in relation to specific cases be retained after a DNA profile is generated? If so, why, and for how long?

Q38 Should crime scene samples be retained after the associated criminal investigation is closed? If so, do you think they should be retained in all cases or only in cases over a certain threshold of seriousness? How long should they be retained?

Q39 How should a convicted person's request for reanalysis of a crime scene sample be managed? Should the procedure be set out in legislation?

DNA PROFILES

14.67 In most instances, the DNA profile generated from a biological sample can be retained (on a case file and/or on a databank) for much longer than the sample itself. This reflects the fact that DNA profiles contain much less personal information but can still be used for identification purposes.

Retention periods

14.68 Table 2 outlines the general rules around how long a profile is retained on the known person databank (either the Temporary Databank or the DPD) until it must be destroyed. For profiles that are not required to be destroyed, Table 2 shows the length of retention.

14.69 The retention periods apply to adults and children, unless indicated otherwise. Different rules apply to profiles obtained from young persons as we explain later in this section.

14.70 The rules around retention of a DNA profile depend on how the biological sample was originally obtained (from which the DNA profile was generated). If the biological sample was obtained under the CIBS Act, retention depends on the Part of the Act under which it was obtained.

Table 2: Retention of DNA profiles

ORIGIN OF DNA PROFILE	HOW LONG IS THE PROFILE STORED?	WHERE IS IT STORED?	STATUTORY PROVISION
DNA profile obtained for casework			
Crime scene sample	Indefinitely.	On the case file; on the Crime Sample Databank (in most cases)	None
Suspect sample (by consent or compulsion under Part 2 CIBS Act – see Chapter 8)	Until either: - 24 months has passed and no charge has been filed (unless this period is extended by a judge); or - if a charge is filed within that time, the court proceedings have concluded.[41] After either of these events, the DNA profile must be destroyed "as soon as practicable" unless the person is convicted of a qualifying offence. If a person is convicted, the profile is held indefinitely.	On the case file Transferred to DPD (following conviction)	CIBS Act, ss 26(a), 26A(5)(c), 60, and 61
Suspect sample (indirect collection – see Chapter 9)	Indefinitely.	On the case file	None
Elimination sample (see Chapter 8)	24 months (or longer) or until any court proceeding is concluded.	On the case file	None
Non-prosecutable child suspect sample (Part 2A CIBS Act)	Until the forensic comparison results are received by Police and either: - the results indicate the suspect was not involved in the offending; or - Police makes an application for a care and protection order based on the results within 60 days and that application is determined by the Family Court; or - Police does not make an application for a care and protection order within 60 days. After any of these events the profile must be destroyed "as soon as practicable". (Does not apply to adults.)	On the case file	CIBS Act, section 61A

[41] The proceedings end when the charge is withdrawn, the person is acquitted or the person is convicted and the appeal period expires.

ORIGIN OF DNA PROFILE	HOW LONG IS THE PROFILE STORED?	WHERE IS IT STORED?	STATUTORY PROVISION
DNA profile obtained for the known person databank			
Temporary Databank sample (Part 2B CIBS Act)	Until either: • two months has passed and no charge is filed;[42] or • a charge is filed and the court proceedings have concluded.[43] After either of these events, the profile must be destroyed as soon as practicable. If a person is convicted, the profile is held indefinitely. (Does not apply to a child.)	On the Temporary Databank Transferred to DPD (following conviction)	CIBS Act, sections 26(ab) and 60A(3)
Databank consent sample (Part 3 CIBS Act)	Indefinitely, unless the person withdraws their consent. Even if the person withdraws their consent, the profile may still be retained indefinitely if they have been convicted of a qualifying offence in the interim.[44] (Does not apply to a child.)	On the DPD	CIBS Act, sections 26(b), 36 and 62
Databank compulsion notice (Part 3 CIBS Act)	Indefinitely,[45] unless, the person's conviction is quashed. In that scenario, the profile must be destroyed "as soon as practicable".	On the DPD	CIBS Act, sections 26(b) and 62
Dual sample (Parts 2 and 3 CIBS Act)	The profile is retained both as a suspect profile and as a databank request profile. (Does not apply to a child.)	On the case file, on the DPD	CIBS Act, section 33

42 This is what the Act provides, but ESR has advised that its practice is to destroy after three months.

43 The proceedings end when the charge is withdrawn, the person is acquitted or the person is convicted and the appeal period expires.

44 The profile may also remain on the DPD for a number of other reasons – even if a person withdraws their consent – including if Police is contemplating or is in the process of seeking a sample from the person under the suspect regime (by consent or compulsion order). See Criminal Investigations (Bodily Samples) Act 1995, ss 36–38.

45 This includes children. In respect of young persons, the period the profile is retained depends on the offence and provision under which the young person was sentenced. The period may end up being retained for four years, 10 years or indefinitely.

Retention of profiles from adults

14.71 The default position for an adult is that their DNA profile may be retained indefinitely on the DPD upon conviction for a qualifying offence. DNA profiles that are obtained as databank consent samples under Part 3 remain on the DPD as long as the consent is not validly withdrawn.[46]

14.72 There is one exception to the default position if the original sample was obtained under Part 2 or 2B of the CIBS Act in relation to an offence that was not a "relevant offence" at the time of conviction.[47] A person's profile must be removed from the known person databank if the person is not convicted of a further qualifying offence within 10 years – either from the date of conviction for the original offence or from the date on which they are no longer subject to a sentence of imprisonment for that offence (whichever is later).[48]

Retention of profiles from children

14.73 As shown in Table 2, profiles from convicted children[49] are also retained indefinitely. However, there are far fewer offences for which children can be prosecuted. They are murder or manslaughter or, if the child is aged 12 or 13 years old, an offence with a maximum penalty of life imprisonment or at least 14 years' imprisonment or, if the child is a previous offender, an offence with a maximum penalty of imprisonment of between 10 and 13 years (inclusive).[50]

14.74 If a child is convicted of one of these offences and either a suspect sample was obtained prior to conviction[51] or obtained post-conviction (pursuant to a databank compulsion notice),[52] their DNA profile will be held on the DPD indefinitely.

Retention of profiles from young persons

14.75 For young persons, the situation is very different. Prior to 2009, the situation for young persons was essentially the same as for adults, with the exception that databank consent samples could not be obtained under Part 3. However, the addition of Part 2B to the CIBS

46 If a person withdraws their consent their profile may still remain on the DPD, for instance, if they have been convicted of a qualifying offence in the interim or if Police is contemplating or is in the process of seeking a sample from the person under the suspect regime (by consent or compulsion order). See Criminal Investigations (Bodily Samples) Act 1995, ss 36–38. Police advises that not many people withdraw their consent and therefore not many of these profiles are removed.

47 See the definition of "relevant offence" in section 2 of the Criminal Investigations (Bodily Samples) Act 1995 and the discussion of that phrase in Chapter 4. In summary, "relevant offence" incorporates all the offences listed in the three Parts that comprise the Schedule to the Act and includes serious sexual and violent offences, offences punishable by seven years' imprisonment or more (as well as attempts and conspiracies) and 23 offences that have a maximum penalty of less than seven years' imprisonment. Twenty of these offences are listed in Part 3 of the Schedule that was added in 2009. These include selected offences under the Animal Welfare Act 1999, the Arms Act 1983, the Crimes Act 1961, the Land Transport Act 1998 and the Summary Offences Act 1981 (peeping and peering).

48 Criminal Investigations (Bodily Samples) Act 1995, s 26A(6)(a)(i).

49 Criminal Investigations (Bodily Samples) Act 1995, s 2.

50 "Previous offender" means that the child has previously committed murder or manslaughter, an offence with a maximum penalty of life imprisonment or at least 14 years' imprisonment or an offence punishable by a maximum penalty of between 10 and 13 years' imprisonment (inclusive) (see Oranga Tamariki Act 1989, s 272(1A) and (1B)). We discuss obtaining samples from children in more detail in Chapter 8.

51 Pursuant to a juvenile compulsion order under Part 2 of the Criminal Investigations (Bodily Samples) Act 1995. See Chapter 8.

52 Under Part 3 of the Criminal Investigations (Bodily Samples) Act 1995.

Act in 2009 meant a young person could be required to provide a sample if Police intended to charge or had arrested the young person with committing a "relevant offence"[53] (as opposed to an imprisonable offence). Since 2009, the number of samples obtained from young persons has increased significantly, and consequently, the number of profiles retained on the known person databank has increased.[54]

14.76 Alongside these changes, the 2009 amendment brought in a complicated scheme for the retention of DNA profiles from young persons. The relevant retention period depends on the seriousness of the charge the young person originally faced, the Part of the Act under which their sample was taken and their sentence or order following conviction (or the charge being proved in the Youth Court). The initial applicable retention periods are four years, 10 years or an indefinite period of retention.[55]

14.77 A four-year retention period will only apply if the Youth Court discharges a charge against a young person after finding it proved.[56] The 10-year retention period applies for other community-based sentences or orders imposed by a court, and the indefinite period applies if the young person was sentenced to imprisonment or if their sample was obtained under a Part 3 databank compulsion notice.[57]

14.78 If during an initial time-limited retention period the young person is convicted of another offence (or another charge is proved against them in the Youth Court), an additional retention period will apply concurrently. Depending on the offence, the sentence received or court order imposed, the period will either be four years, 10 years or indefinite retention.

14.79 There are two other situations where a young person's profile may be removed from the DPD after 10 years. The first is if the young person was originally convicted of an offence that was not a relevant offence at the time of conviction, a court imposed a community-based sentence and the young person is not convicted of any further qualifying offence within a 10 year period.[58] The second is if the young person was convicted prior to the 2009 changes, was not sentenced to imprisonment and is not convicted of any further qualifying offence within a 10 year period. The young person's profile will be removed from the databank and destroyed if they make this request in writing to the Commissioner.[59]

53 See the definition of "relevant offence" in section 2 of the Criminal Investigations (Bodily Samples) Act 1995 and the discussion of the phrase in Chapter 4. In summary, "relevant offence" incorporates all the offences listed in the three Parts that comprise the Schedule to the Act and includes serious sexual and violent offences, offences punishable by seven years' imprisonment or more (as well as attempts and conspiracies) and 23 offences that have a maximum penalty of less than seven years' imprisonment. Twenty of these offences are listed in Part 3 of the Schedule that was added in 2009. These include selected offences under the Animal Welfare Act 1999, the Arms Act 1983, the Crimes Act 1961, the Land Transport Act 1998 and the Summary Offences Act 1981 (peeping and peering).

54 See Chapter 11 for more detailed discussion of the data.

55 Criminal Investigations (Bodily Samples) Act 1995, ss 26(ab)–(ac) and 26A.

56 Criminal Investigations (Bodily Samples) Act 1995, ss 26(ac) and 26A(3).

57 The Police Manual notes, however, that a databank compulsion notice cannot be obtained from a young person who receives "a s 282 order only". Police Manual *DNA Sampling* at 30. We understand this to mean that Police will not apply for a databank compulsion notice where the Youth Court discharges the charge (or charges) under section 282 of the Oranga Tamariki Act 1989 or where the Youth Court makes a finding that a charge against a young person is proven but then discharges the charge under section 282 of the Oranga Tamariki Act 1989 and makes no further orders. This guidance in the Police Manual appears to have been inserted after a 2006 case, *Police* v *JL* [2006] 404 (YC), where the Court held that a databank compulsion notice was of no effect where a charge had been proved but then discharged.

58 Criminal Investigations (Bodily Samples) Act 1995, s 26(6)(a)(i).

59 Criminal Investigations (Bodily Samples) Act 1995, s26B.

ISSUES WITH DNA PROFILES

14.80 First, we consider issues that relate to all DNA profiles. We then discuss specific issues that relate to DNA profiles from known persons and then the specific issues that relate to crime scene DNA profiles.

Common issues

14.81 The CIBS Act provides that no one is to have access to nor disclose any information stored on a databank except for the purposes specified in the CIBS Act. It is an offence punishable by a term of imprisonment to contravene the section.[60] There are also rules around destruction of profiles when the original sample was obtained under the CIBS Act (Table 2).

14.82 However, as with biological samples, the CIBS Act does not cover all DNA profiles from known persons (such as elimination samples or indirect samples), nor does it cover crime scene profiles, whether or not they are stored on the CSD.[61]

14.83 Even with profiles generated from samples obtained under the CIBS Act, there is no particular oversight mechanism to ensure against inappropriate access, to ensure security of profiles and to audit destruction of profiles, nor is there any provision for general oversight of the operation of the known person databank.

14.84 Instead, Police and ESR's own internal protocols, audit and management systems govern these matters. We have no particular concerns around inappropriate retention of profiles or issues with destruction.[62] However, there is a possible issue on the horizon regarding the electronic security of profiles. Currently, ESR maintains the known person databank and the CSD on its own separate dedicated system. However, were analysis of biological samples to change, for example, to whole genome sequencing, this would require extensive (possibly external) computing storage of the resulting profiles – even if entire sequences were only stored temporarily. This would then raise concerns about data security.

Option for reform

14.85 Given that DNA profiles contain information about identifiable people, it is important that there is transparency around destruction and security of retention. An independent oversight body could be given the task of overseeing the retention of profiles on case files and on the databanks. This would provide reassurance as well as upholding the information privacy principles and the principles of rangatiratanga, equity and partnership under the Treaty of Waitangi.

14.86 In Chapter 15, we discuss oversight further and, in particular, what an independent oversight body might look like and the functions it could perform.

60 Criminal Investigations (Bodily Samples) Act 1995, ss 24R, 27, and 77(2). The maximum penalty is three years' imprisonment.

61 The Crime Sample Databank is not regulated. See Chapter 10.

62 One breach of the known person databank was reported in 2009. There were allegations that an ESR staff member inappropriately disclosed information. This was investigated by Police. Randal Jackson "Police investigate DNA database breach" (4 June 2009) Computerworld <www.computerworld.co.nz>.

Retention of casework profiles on the electronic case file

14.87 An issue that arises within casework is that suspect and elimination profiles are stored on the electronic case file pending the outcome of the investigation and any associated proceedings. There is a lack of transparency with this approach.

14.88 One way to deal with this issue would be to adopt a DNA database system containing indices – as is the approach in some overseas jurisdictions. These often include a suspect index and a victims and/or volunteer (limited purposes) index,[63] which equate roughly to suspect and elimination profiles in New Zealand. Along with the indices are statutory rules around permissible matches – for instance, whether a profile from a known person can only be compared to a specific crime scene profile or can also be compared to a databank of crime scene profiles (in New Zealand, this would be the CSD). In our view, having indices would provide more transparency than storing profiles on a case file. Having rules around permissible matching accessible in statute would also provide certainty and transparency.[64]

Retention of profiles on the known person databank

14.89 The known person databank is constantly searched to generate leads in criminal investigations. Therefore, the key issue is how long should DNA profiles be retained on the known person databank. This raises further questions. How useful is the retention of profiles to criminal investigations? What is the effect on people of retaining profiles on the known person databank? Should there be greater consistency with the Criminal Records (Clean Slate) Act 2004 and the youth justice principles in the Oranga Tamariki Act 1989?

Consistency with the Criminal Records (Clean Slate) Act 2004

14.90 When changes were proposed to the CIBS Act in 2009, the Privacy Commissioner argued that there should be greater alignment between the retention periods for DNA profiles in the CIBS Act and the clean slate scheme.[65] This argument is based on the notion that the State retaining a person's DNA profile on the known person databank is part of the continuing adverse effects of a criminal conviction.

14.91 In response, the New Zealand Police Association (NZPA) disagreed, stating:[66]

> The 'clean slate' regimes proposed for the DNA databank are quite different to the regime contained in the Criminal Records (Clean Slate) Act 2004. In the latter case, the policy objective was to allow 'one time' or reformed minor offenders to escape the negative career and social consequences associated with their past mistake(s) being publicly available. That is a clear and understandable policy objective. However, no such purpose would be served by 'clean slating' the DNA databank, which is not public, and has no potential to cause negative career or social consequences. The only outcome would be to limit the utility of the databank as an investigative tool in solving crime.

63 See the cross-jurisdictional table in Chapter 4.

64 We discuss the indices model in more detail in Chapters 8 and 11.

65 Privacy Commissioner "Supplementary Submission to the Justice and Electoral Committee on the Criminal Investigations (Bodily Samples) Amendment Bill 2009" (26 May 2009) at [1.7]–[1.9].

66 New Zealand Police Association "Submission to the Justice and Electoral Committee on the Criminal Investigations (Bodily Samples) Amendment Bill 2009" at [34].

14.92 This response raises two questions:

- What is the effect on a person, if any, of having their DNA profile retained on the known person databank?
- Are DNA profile databanks more effective the more DNA profiles they contain?

14.93 We discuss these questions further but first we examine the clean slate regime in the Criminal Records (Clean Slate) Act 2004. The aim of the clean slate regime is to limit the effect of an individual's convictions "to enable law-abiding citizens to live free from the adverse effects of historical criminal records".[67] To achieve this, the Clean Slate Act creates a clean slate scheme. If a person is eligible for the scheme, despite the existence of one or more convictions, they are deemed to have no criminal record for the purposes of any question asked of them about their criminal record and the right to have that record concealed by government departments and law enforcement agencies that hold or have access to that record.[68] There are exceptions but they are not relevant for the purposes of this discussion.[69]

14.94 Under the Act, a person is eligible for the clean slate scheme if they meet all of the following requirements.[70] They must have:

(a) not been convicted of an offence for the last seven years;

(b) never been sentenced to a custodial sentence;

(c) never been convicted of a "specified offence" (these are sexual offences);

(d) fully paid any fine, compensation, reparation or costs ordered by the court in a criminal case;

(e) never been banned from driving until further notice (indefinite disqualification); and

(f) never been held in hospital by the court in a criminal case instead of being sentenced, due to a mental condition.

14.95 If we compare the clean slate scheme to the retention periods for DNA profiles under the CIBS Act, there are distinct differences:

- The "rehabilitation period" under the clean slate scheme is seven years, but under the CIBS Act, it is 10 years (for an adult in some situations) and four years or 10 years for young persons.
- A person will not qualify for the clean slate scheme if they have been convicted of a specified sexual offence. By contrast, a person will not qualify to have their DNA profile removed from the known person databank if they have been convicted of any offence punishable by seven years' imprisonment or more or any of the other 23

67 Criminal Records (Clean Slate) Bill 2001 (183-1) (explanatory note) at 1.

68 Criminal Records (Clean Slate) Act 2004, s 3.

69 Section 19 of the Act sets out the exceptions to the general effect of the clean slate scheme. The individual's criminal record may be disclosed if the record is necessary for the exercise of the prevention, detection, investigation or prosecution functions of domestic or foreign law enforcement agencies, for the administration of sentences by law enforcement agencies or in connection with the functions of the New Zealand Security Intelligence Service; the record is relevant to criminal or civil proceedings before a court or the New Zealand Parole Board; the individual has made an application under the Arms Act 1983 and the record is necessary to complete the required statutory processes; the individual has made an employment application for specified roles listed in the Act or for a role involving the care and protection of children; the record is relevant to an investigation under the Oranga Tamariki Act 1989; or the record is relevant to the undertaking of research requiring access to criminal history information that complies with the requirements of the Act.

70 Criminal Records (Clean Slate) Act 2004, s 7.

specified relevant offences.[71] This includes all of the sexual offences in the Criminal Records (Clean Slate) Act 2004 plus a wide range of other offences. Significantly, the most common category of offending in New Zealand is dishonesty offending, which consists of general theft, burglary and vehicle crime. A conviction for most dishonesty offences would exclude a person from having their DNA profile ever removed from the databank.

- A person will not qualify for the clean slate scheme if they have been sentenced to imprisonment. However, this would not prevent a person (in limited circumstances) from having their DNA profile removed from the known person databank.

14.96 The inconsistencies between these legislative regimes come from their different policy focus. The clean slate scheme is directed at the negative consequences of the public availability of information about a person's criminal past. DNA profiles obtained under the CIBS Act are not publicly available. The NZPA argues it is that availability that creates the difference in consequential impact. That leads to the question: Does retaining a DNA profile of itself lead to negative consequences?

Stigmatisation

14.97 There is academic debate around whether the retention of a person's DNA profile on the known person databank is likely to have any adverse effect on their psyche.[72] On one side, the common refrain is "nothing to hide, nothing to fear". This suggests that, as long as a person does not intend to reoffend, they have no reason to be concerned about their profile being included on the known person databank. On the other side, it is suggested that a person may feel stigmatised by being recorded in an official State register as someone who is "risky" in comparison to other law-abiding citizens.[73] This may be felt particularly keenly by people who have not been convicted of any offence or who have worked hard towards rehabilitation.[74]

71 See the definition of "relevant offence" in section 2 of the Criminal Investigations (Bodily Samples) Act 1995 and the discussion of the phrase in Chapter 4. In summary, "relevant offence" incorporates all the offences listed in the three Parts that comprise the Schedule to the Act and includes serious sexual and violent offences, offences punishable by seven years' imprisonment or more (as well as attempts and conspiracies) and 23 offences that have a maximum penalty of less than seven years' imprisonment. Twenty of these offences are listed in Part 3 of the Schedule that was added in 2009. These include selected offences under the Animal Welfare Act 1999, the Arms Act 1983, the Crimes Act 1961, the Land Transport Act 1998 and the Summary Offences Act 1981 (peeping and peering).

72 For a summary of the arguments on both side of this debate, see United Kingdom Human Genetics Commission *Nothing to hide, nothing to fear? Balancing individual rights and the public interest in the governance and use of the National DNA Database* (November 2009) at ch 3. See also Liz Campbell "Criminal Labels, the European Convention on Human Rights and the Presumption of Innocence" (2013) 76 MLR 681; Liz Campbell "A rights-based analysis of DNA retention: 'non-conviction' databases and the liberal state" (2010) 12 Crim LR 889; David Turner "Towards a DNA Dystopia? Human Rights Concerns Under the Criminal Investigation (Bodily Samples) Act 2009" (2011) 2 NZLSJ 502; Brian Blakemore and Christopher Blake "Can the National DNA Database be Effective and Comply with Human Rights Legislation" (2012) 85 Pol J 191; Debra Wilson *Genetics, Crime and Justice* (Edward Elgar Publishing, Cheltenham (UK), 2015); and Forensic Genetics Policy Initiative *Establishing Best Practice for Forensic DNA Databases* (September 2017).

73 Liz Campbell "Criminal Labels, the European Convention on Human Rights and the Presumption of Innocence" (2013) 76 MLR 681.

74 As explained in Chapter 11, many of the profiles that are currently on the known person databank were originally obtained by consent. As discussed in Chapters 8 and 11, the circumstances surrounding a police officer asking a person to provide a databank consent sample (under Part 3) may mean that, in some cases, the person may not have felt like they had any real choice. In addition, samples that are obtained under Part 2B of the Act are held on the known person databank, pending the outcome of the court proceedings against them. This has been described as a kind of "genetic probation": David Turner "Towards a DNA Dystopia? Human Rights Concerns under the Criminal Investigation (Bodily Samples) Act 2009" (2011) 2 NZLSJ 502.

14.98 The Economic and Social Research Council Centre for Economic and Social Aspects of Genomics in the United Kingdom has articulated this as an argument that known person databanks create a distinct category of 'pre-suspects':[75]

> People whose profiles are on the database are the 'pre-suspects' … – the first to be suspected (and eliminated) whenever a new crime scene profile is entered onto the database. In this respect they occupy a different space within the criminal justice system from the rest of the population; they are under greater surveillance and, with the advent of familial searching, this differential status can be extended to their relatives too.

14.99 Another group of people who may feel a heightened sense of stigma, due to their vulnerability and stage of development, is young persons. This is linked to the idea that, once a person is labelled as an offender and treated by the State in that way, that person may become more likely to reoffend.[76]

Youth justice principles

14.100 The vulnerability of young persons involved in the criminal justice system has been recognised by the development of specific youth justice principles in the Oranga Tamariki Act 1989.[77] Of particular note for the purpose of this chapter is the following:[78]

> The principle that any sanctions imposed on a child or young person should –
>
> (i) Take the form most likely to maintain and promote the development of the child or young person within their family, whanau, hapu and family group; and
>
> (ii) Take the least restrictive form that is appropriate in the circumstances.

14.101 Collectively, the youth justice principles emphasise the importance of rehabilitation and reintegration. To some extent, this is already reflected in the CIBS Act, which provides different retention periods depending on whether the person in question was an adult or a young person at the time of the offending. This is arguably an improvement on the situation before 2009 when the default position was for profiles of young persons to be held indefinitely, but the 2009 changes have also resulted in the profiles of more young persons being retained, even in situations where the Youth Court has discharged charges against them (after finding the charges proved).[79] Retention of profiles in this situation seems at odds with the rehabilitative focus of the youth justice regime.

14.102 A young person's DNA profile will still be retained indefinitely if they are sentenced to imprisonment or if their sample was originally obtained under Part 3 using a databank compulsion notice.[80] The only way to avoid this is if the offence was not a relevant

75 United Kingdom Human Genetics Commission *Nothing to hide, nothing to fear? Balancing individual rights and the public interest in the governance and use of the National DNA Database* (November 2009) at [3.14].

76 See generally Ted Chiricos and others "The Labeling of Convicted Felons and its Consequences for Recidivism" (2007) 45 Criminology 547.

77 See Chapter 8 for more detailed discussion.

78 Oranga Tamariki Act 1989, s 208(f).

79 Oranga Tamariki Act 1989, s 282. This is as distinct from a straight discharge of charges under section 282. The former is more akin to a "conviction and discharge" of an adult as opposed to "a discharge without a conviction". It is not, however, an exact comparison due to the difference in the way offences are pleaded in the Youth Court and the status of "proven" in the Youth Court. See Nessa Lynch *Youth Justice in New Zealand* (2nd ed, Thomson Reuters, Wellington, 2016) at [7.4].

80 The Police Manual notes, however, that a databank compulsion notice cannot be obtained from a young person who receives "a s 282 order only". Police Manual *DNA Sampling* at 30. We understand this to mean that Police will not apply for a databank compulsion notice where the Youth Court discharges the charge (or charges) under section 282 of the Oranga Tamariki Act 1989 or where the Youth Court makes a finding that a charge against a young person is proven but then discharges the charge under section 282 of the Oranga Tamariki Act 1989 and makes no further orders. This

offence, the sentence was not imprisonment and the young person does not reoffend for 10 years. In those circumstances the profile must be removed.[81]

14.103 In this context, it is also important to consider how to address the disproportionate impact that the DNA regime has on Māori children and young persons. Due to a variety of factors, Māori may encounter the criminal justice system at a young age and remain in and around the system for much of their lives. As we noted in Chapter 11, of the profiles being obtained for the DPD from children and young persons, 67 per cent are from Māori children and young persons. This is inconsistent to the Youth Crime Action Plan that Police and other agencies are responsible for delivering. Two of the three key strategies are to reduce escalation and provide early and sustainable exits from the criminal justice system for young persons.[82] A particular focus of the Plan is on rangatahi Māori who have come to the attention of Police.

14.104 The system for retention of profiles from young persons is also overly complex. That complexity means that the law is not particularly accessible and is difficult to apply in practice. These concerns might be alleviated to some extent if an oversight body were monitoring compliance with the retention regime. ESR and Police currently conduct their own internal audits, but as we have noted in respect of several issues, the issue is one of transparency and reassurance more than strict compliance.

14.105 The United Kingdom has opted for a different approach with profiles from young persons. In 2013, it introduced a new retention regime for DNA profiles from persons convicted of a first minor offence committed when they were under the age of 18. Under this regime, the retention period is determined by the length and nature of the sentence imposed for that minor offence. Where a custodial sentence of five or more years is imposed, the DNA profile may be retained indefinitely. Where the custodial sentence is less than five years, the DNA profile may be retained for the duration of the sentence (both the period spent in custody and the period of the sentence served in the community) plus a further five years. Where a young person is given a non-custodial sentence on conviction for their first minor offence, their DNA profile may be retained for five years from the date it was generated. Any subsequent conviction for an imprisonable offence, whether before or after they turn 18, will enable the profile to be retained indefinitely.[83]

Utility of the known person databank

14.106 Before any assessment of whether profiles should be removed and after what length of time, it is important to consider the argument that removing profiles would affect the "utility of the [known person] databank as an investigative tool in solving crime".[84]

14.107 There is considerable debate as to whether utility of known person databanks is related to size.[85] Two points are of note. First, cross-jurisdictional comparative research suggests

guidance in the Police Manual appears to have been inserted after a 2006 case - *Police* v *JL* [2006] 404 (YC) where the Court held that a databank compulsion notice was of no effect where a charge had been proved but then discharged.

80 Criminal Investigations (Bodily Samples) Act 1995, ss 26(ac) and 26A(3).

81 We discuss this at [14.79].

82 Ministry of Justice *Youth Crime Action Plan 2013–2023: Report* (2013) at 14.

83 Police and Criminal Evidence Act 1984 (UK), ss 63D, 63J and 63K.

84 New Zealand Police Association "Submission to the Justice and Electoral Committee on the Criminal Investigations (Bodily Samples) Amendment Bill 2009" at [34]. We discuss this at [14.91].

that more expansive DNA profile databanks do not routinely outperform more restrictive DNA profile databanks in terms of the link rate.[86] The link rate is the percentage of profiles that have matched another profile on one of the databanks, for example, a match between two crime scene profiles or a match between a crime scene profile and the profile of a known person. As a measure of effectiveness, the link rate has flaws, but it is the performance indicator most commonly used at present.

14.108 Second, the risk of an adventitious match (or a "false positive") increases as more profiles are added to a known person databank.[87] An adventitious match is a match between two profiles that is purely the result of chance. The profiles are the same, but in fact the associated samples came from two different people. Such a match has the potential to be highly disruptive to a criminal investigation. It can waste police resources in following up a false lead, and it can be highly distressing for any individual who wrongly becomes a person of interest. Overall, the chance of adventitious matches is small, but the possibility suggests that, in the context of the known person databank, more is not necessarily better than less. We note in Chapter 11 that the risk of such matches provides support for the argument against the establishment of a universal databank.

14.109 There is insufficient research to establish conclusively what size of known person databank is most effective. However, we consider that more restrictive databanks are preferable in terms of being constitutionally sound, compliant with human rights and consistent with NZBORA and the principles of the Treaty and minimising the intrusion on tikanga and privacy.

Options for reform

14.110 Our goals in reforming the retention periods for DNA profiles held on the known person databank are three-fold.

14.111 First, to reduce the complexity. A simple system would be easier for the public to understand and Police to apply.

14.112 Second, to increase the emphasis on rehabilitation, particularly for young persons. The retention of profiles from non-offenders and reformed offenders should be avoided where possible. In addition, rehabilitation is a central emphasis of both the youth justice principles and the Criminal Records (Clean Slate) Act 2004, and it is important for criminal justice legislation to be broadly consistent.

14.113 Third, to provide for the removal of profiles following death. This could minimise the intrusion on tikanga and may improve the overall effectiveness of the known person databank. We understand from Police that, in the near future, Police will be informed by the Department of Internal Affairs when an individual has died (as part of DIA's identity

85 For a discussion, see Nessa Lynch and Liz Campbell *The Collection and Retention of DNA from Suspects in New Zealand* (Victoria University Press, Wellington, 2015) at 165–168. See also Filipe Santos, Helena Machado, and Susana Silva "Forensic DNA databases in European countries: is size linked to performance?" (2013) 9 LSSP 1.

86 Filipe Santos, Helena Machado, and Susana Silva "Forensic DNA databases in European countries: is size linked to performance?" (2013) 9 LSSP 1.

87 Over time, the number of loci targeted by the STR profiling analysis kits has increased (see Chapter 3). This has meant that the risk of adventitious matches has become less likely. However, if a crime scene profile is degraded or partial, this increases the chance of an adventitious match. For further discussion of adventitious matches, their likelihood and their potential effects, see United Kingdom Human Genetics Commission *Nothing to hide, nothing to fear? Balancing individual rights and the public interest in the governance and use of the National DNA Database* (November 2009) at [3.17]–[3.22].

management system). Having such information would more easily facilitate the removal of profiles from the DPD after a person's death.

14.114 To achieve those goals, we are considering a number of options.[88] Many are predicated on the idea that the known person databank will contain the profiles of those convicted of criminal offending, which may not be the case if consensual sampling for the known person databank is retained.

(a) Having a rehabilitation period of five, seven or 10 years following the completion of any sentence. If no offending occurs during that period, the profile should be removed. This would promote rehabilitation but would not necessarily be appropriate for all offenders. For example, it may not be appropriate if an offender had an extensive criminal history prior to the rehabilitation period. It may be more appropriate for young persons.

(b) Enabling profiles to be removed if the person is assessed as being eligible for the clean slate scheme. For example, in Portugal, profiles are removed if the person's criminal record is annulled. This would align more closely with the Criminal Records (Clean Slate) Act 2004, but it is not an exact fit. A person's criminal record is only deemed not to exist for certain purposes if the clean slate scheme applies.

(c) Calculating retention periods based on the actual sentence imposed on the person. For example, as discussed above, in the United Kingdom, young person profiles are retained indefinitely if the person is sentenced to imprisonment for five years or more but are retained for only five years in relation to a lesser sentence. This would better reflect the actual criminality of the offending and therefore the person's likelihood of reoffending, which does not necessarily correlate to the maximum penalty for the applicable charge.

(d) Calculating retention periods based on the maximum penalty for the offending. For example, in the Netherlands, profiles are retained for 30 years if the offence is punishable by six years' imprisonment or more, 20 years for lesser offences and 80 years for sexual offences against minors. This is simpler than calculating retention periods based on sentence length as there is no need for monitoring the sentencing process. However, it is a less nuanced approach to assessing criminality.

(e) Having a default retention period that begins either from the time the conviction is entered or from the time the sentence is completed. For example, in Belgium and Poland, profiles are retained for 30 and 35 years respectively following conviction. In France, Hungary and Sweden, profiles are retained for 40, 20 and 10 years respectively from when any sentence is completed. The benefit of focusing on the end of any sentence is that any prison time, where a person may be artificially prohibited from offending, does not reduce the retention period. A further option would be for indefinite retention to remain the default retention period for adult offenders in New Zealand as it is in the United Kingdom and Ireland.

(f) Empowering the courts to set a retention period at the time of sentencing. This would allow for individual assessment of the person's likelihood of reoffending, but it may over-complicate the sentencing process and could result in inconsistencies.

88 The cross-jurisdictional information concerning these options is from Filipe Santos, Helena Machado, and Susana Silva "Forensic DNA databases in European countries: is size linked to performance?" (2013) 9 LSSP 1.

(g) Removing profiles a set period of time after a person's death. For example, in Denmark, Estonia, Finland, Lithuania, Luxembourg, Romania and the Netherlands, profiles are removed two, five, 10 or 12 years after death.

(h) Removing profiles once the person reaches a certain age. For example, in Romania and France, profiles are automatically removed when the person reaches 60 or 80 years old respectively. In Slovakia, profiles are generally retained for 100 years from the person's date of birth.

(i) Reviewing the retention of profiles after a set period of time or on request of the person concerned. For example, in Germany, retention is automatically reviewed after 10 years for adults, five years for young persons and two years for children. In France, retention can be reviewed on request.

(j) Making an oversight body responsible for auditing compliance with any statutory provisions governing the retention of DNA profiles and monitoring for consistency with the Treaty of Waitangi, NZBORA, tikanga and privacy obligations.

(k) Retaining profiles on a database system with multiple indices, with rules for permissible matching set out in legislation.

Retention of crime scene profiles

14.115 The retention of crime scene profiles on the CSD is problematic. Current policy is to retain all crime scene profiles on the CSD indefinitely. The only profiles that are removed are those that relate to individuals who, police officers later discover, had "legitimate access to the crime scene" (such as a third party or victim). However, the case of *Police v SJ* (discussed in Chapter 10) suggests that this information is not always communicated to ESR. This is alongside the issue we discussed in Chapter 10 that we are aware that some profiles have been uploaded onto the CSD without there being a good law enforcement reason to do so.

14.116 Looking at this issue through the lens of the information privacy principles, crime scene profiles should be removed from the CSD as soon as the person responsible for the crime scene profile is identified and, if that person is identified as a suspect, the investigation into the relevant offence is resolved. At that point, the crime scene profile is no longer needed for the original purpose for which it was collected: to identify the offender. Ideally, this means that ESR should be notified as soon as a crime scene profile is found to be irrelevant to the related investigation or the investigation has been resolved.

14.117 The difficulty is that the timing of these events is varied and unpredictable. Decisions could be made at any time to rule a person out of an investigation or not to lay charges. Charges that are laid could be withdrawn or the defendant could plead guilty. If the matter goes to trial, the defendant could be acquitted or convicted. At any point, it is also possible that the person may die. Ensuring that ESR is made aware of these events would impose a significant administrative burden on Police, and at present, there is no express statutory obligation that would require Police to incur that cost. As noted throughout this paper, the CSD is not regulated in any way by legislation.

14.118 There may be a temptation to retain crime scene profiles indefinitely in case they generate a useful investigative lead in the future, but not only would this be an arguable breach of the privacy principles and the principles of the Treaty of Waitangi, it would undermine the collection and retention criteria for the known person databank. There is

no point in carefully controlling whose profiles may be retained on the known person databank if the Crime Sample Databank can be used to the same effect (through internal matching and consulting case files)[89] with no constraints. Further, while the circumstances were different, *Police v SJ* already indicates that the courts are not willing to condone the CSD being used in this way.[90]

Options for reform

14.119 It would be administratively difficult for Police to develop a system for notifying ESR when a crime scene profile must be removed from the CSD. However, as explained above, there are compelling policy reasons to do so. To give effect to that, policy legislation could contain provisions that do one or more of the following:

(a) State that crime scene profiles may only be retained on the CSD until the person responsible for the profile is identified and – if the person is identified as a suspect – the investigation into the relevant offence has been resolved. Profiles could still be retained on the case file for future reference in relation to the specific investigation.

(b) Prohibit police officers from acting upon an investigative lead if it was generated from a crime scene profile that should have been removed from the CSD.

(c) Empower an oversight body to periodically audit the CSD to ensure that crime scene profiles are not retained on the databank for longer than necessary. Oversight is discussed in Chapter 15.

14.120 An alternative option, if more flexibility were required, would be for Police and ESR to sign a publicly available protocol governing the removal of crime scene profiles from the CSD. The Privacy Commissioner (or a different oversight body) could be responsible for ensuring compliance with the protocol and could have some form of auditing role.

89 For instance, as in the case of *Police* v *SJ*, if a person admits to being present at a crime scene and by inference is likely to be, or admits to being, the owner of a DNA profile found at a crime scene (in *Police v SJ*, SJ's argument was that consensual sexual intercourse had occurred), if that profile is uploaded to the CSD and matches another unresolved crime scene profile, this would act as a lead and circumvent the known person databank.

90 See Chapter 10.

Q40 Do you have any concerns around DNA profiles being retained on the known person databank indefinitely?

Q41 Do you think the DNA profile retention periods that currently apply to the known person databank should be simplified?

Q42 Do you think that the DNA profile retention periods that apply to the known person databank should be changed to place a greater emphasis on rehabilitation?

Q43 Do you think that steps should be taken to ensure that a person's DNA profile is not retained for a lengthy period of time on the known person databank following their death? If so, what measures do you think should be put in place?

Q44 Should crime scene profiles be retained on the Crime Sample Databank indefinitely? If not, what legislation and/or policies do you think would ensure that the profiles are removed at an appropriate time?

Q45 Should an independent oversight body oversee the retention, security and destruction (as appropriate) of DNA profiles (whether held on case files, indices or databanks)?

CHAPTER 15

Oversight

INTRODUCTION

15.1 Throughout this issues paper, we have identified a considerable number of options for reform that would require the involvement of an oversight body. In doing so, we have been conscious of two things. First, most of the jurisdictions that New Zealand traditionally compares itself with have established one or more bodies to independently oversee the operation of their DNA profile databanks. Second, there would be considerable cost, both financial and administrative, in establishing an oversight regime in New Zealand. The benefits need to outweigh those costs.

15.2 The State Services Commission (SSC) has published guidelines on how to decide whether to establish a new public body.[1] This chapter begins by summarising those guidelines. We then review the various functions we have proposed for an oversight body throughout this issues paper. We compare those functions to the functions of equivalent oversight bodies overseas and to those of pre-existing public bodies in New Zealand.

15.3 This leads to a discussion of what an appropriate oversight framework might look like in new legislation dealing with the use of DNA in criminal investigations in New Zealand. We suggest that one of the key features of such a framework should be a central decision-making role for Māori. This would reflect the disproportionate impact that policy and operational decisions in this area have on Māori and uphold the Treaty principles of equity, partnership and rangatiratanga.

THE SSC GUIDELINES

15.4 According to the SSC, two main questions need to be asked when considering changes to the machinery of government:

(a) What type of agency is required to address the issues identified.[2]

(b) Can a pre-existing body perform the desired role, or is a new body required?[3]

15.5 Determining the type of agency required involves several considerations. Primarily, the SSC advises that the agency's form will be shaped by the functions and powers it is required to carry out. Organisational choice is also influenced by factors such as the

1 State Services Commission *Reviewing the Machinery of Government* (February 2007). The Legislation Design and Advisory Committee *Legislation Guidelines* (March 2018) at 94–98 contain similar guidance on the establishment of a new public body.

2 State Services Commission *Reviewing the Machinery of Government* (February 2007) at 5–16.

3 State Services Commission *Reviewing the Machinery of Government* (February 2007) at 18.

agency's role, funding arrangements, relevant risks and the nature of the applicable governance and accountability regimes.[4]

15.6 Once the functions and powers of a possible new agency have been identified, the next step is to determine whether a pre-existing public body could undertake those tasks. This assessment helps to protect against "fragmentation" or the proliferation of agencies.[5] Fragmentation complicates service delivery, increases governance costs, blurs accountability, spreads leadership and talent too thinly and undermines the capability of existing agencies.[6]

15.7 The SSC advises that a new agency should be considered only if the proposed functions are incompatible with pre-existing bodies, if expanding the mandate of an existing body is not feasible, if the new body has guaranteed long-term viability and where the new body is justified on a cost-benefit basis. If an existing body is instead selected, it must be 'fit for purpose' and capable of performing the required role without jeopardising its existing functions.

SUGGESTED OVERSIGHT FUNCTIONS

15.8 In accordance with the SSC guidance, the starting point is to ask: What functions would a public body overseeing the use of DNA in criminal investigations perform and what powers would be necessary to fulfil those functions?

15.9 Table 1 below indicates where we have put forward a reform option that would involve an oversight body. The list is extensive but we do not envisage that all of these functions would be performed by one body. Also, some functions are alternatives, so not all would be implemented. In other instances, a different reform option that does not involve an oversight body may be preferred. Where it is decided that functions do need to be performed by an oversight body, these could be shared between multiple agencies, as we discuss at the end of this chapter. Nevertheless, the table indicates there is a wide range of potential oversight functions.

15.10 These functions relate to:

(a) specific cases (for example, pre-approving an investigative action, responding to a complaint or reviewing the outcome in a particular case); and

(b) systemic matters (for example, being consulted on or approving policies and/or the adoption of new technology, monitoring compliance with statutory powers, auditing, reporting and engaging in public education campaigns).

15.11 While 10 of the functions relate to specific cases, we envisage these would take up a small proportion of any oversight body's time. That is because, at present, these issues arise (and, we anticipate, will continue to arise) in only a very small number of cases. We envisage that any oversight regime would focus predominantly on systemic matters and consider the New Zealand Bill of Rights Act 1990 (NZBORA), Treaty of Waitangi, ethics, tikanga and privacy issues. As noted, we suggest that a key feature of any oversight is a central decision-making role for Māori to recognise the Treaty principles of

4 State Services Commission *Reviewing the Machinery of Government* (February 2007) at 6.

5 State Services Commission *Reviewing the Machinery of Government* (February 2007) at 18.

6 *Report of the Advisory Group on the Review of the Centre* (November 2001) at 4–5.

rangatiratanga, partnership and equity and to ensure that Māori interests are central to governance and decision-making about the use of DNA in criminal investigations.

Table 1: Suggested oversight functions

CASE-SPECIFIC APPROVALS	
Consider and determine any application from New Zealand Police to use forensic DNA phenotyping in any given case.	Chapter 6 (forensic DNA phenotyping)
Consider and determine any application from Police to conduct a mass screening in any given case.	Chapter 8 (reference samples – direct collection)
Consider and determine any application from Police to obtain and use a biological sample from a close genetic relative of a suspect in any given case.	Chapter 9 (reference samples – indirect collection)
Consider and determine any application from Police to use the CSD in a non-standard way. (This is based on the premise that standard use of the CSD would be governed by legislation and/or policy statements.)	Chapter 10 (Crime Sample Databank)
Consider and determine any application to use the known person databank (or any DNA profile databank) for any secondary purpose.	Chapter 12 (known person databank – use)
Consider and determine any application from Police to conduct a familial search in any given case.	Chapter 13 (familial searching)
Consider and determine any application by a defendant or a convicted person for the Institute of Environmental Science and Research (ESR) to analyse or re-analyse any biological samples of relevance to their case.	Chapter 14 (retention)
COMPLAINTS	
Consider and determine any complaint from a person who has been issued with a contestable suspect sampling notice that the statutory requirements for issuing the notice were not met.	Chapter 8 (reference samples – direct collection)
REVIEW	
Individual cases where a conviction is solely based on DNA evidence.	Chapter 7 (forensic comparison)
Individual cases where a match between an elimination sample and a crime scene sample resulted in that person becoming a suspect.	Chapter 8 (reference samples – direct collection)

CONSULTATION OR APPROVAL OF POLICIES	
Must be consulted on, or approve, Police's policy on forensic DNA phenotyping.	Chapter 6 (forensic DNA phenotyping)
Must be consulted on, or approve, the introduction of any new DNA analysis kits and/or techniques by ESR.	Chapter 7 (forensic comparisons)
Must be consulted on, or approve, ESR and/or Police policies on crime scene examinations, laboratory procedures, communications between ESR and Police in individual cases and the reporting of quality concerns in laboratories	Chapter 7 (forensic comparisons)
Must be consulted on, or approve, Police's policy on mass screening.	Chapter 8 (reference samples – direct collection)
Must be consulted on, or approve, Police's policy on indirect suspect sampling.	Chapter 9 (reference samples – indirect collection)
Must be consulted on, or approve, Police and ESR policies concerning the standard collection, use and retention of profiles on the CSD.	Chapter 10 (Crime Sample Databank)
Must be consulted on, or approve, Police's policy on familial searching.	Chapter 13 (familial searching)
Must be consulted on, or approve, ESR and/or Police policies on the retention and destruction of any biological sample obtained during the course of a criminal investigation.	Chapter 14 (retention)
APPROVAL OF THE USE OF NEW TECHNOLOGIES OR TECHNIQUES	
Must pre-approve the specific traits in relation to which forensic DNA phenotyping may be used.	Chapter 6 (forensic DNA phenotyping)
Must pre-approve the use of any new DNA analysis techniques before they may be used by Police and ESR in casework.	Chapter 6 (forensic DNA phenotyping), Chapter 7 (forensic comparisons)
AUDIT OR MONITOR COMPLIANCE WITH STATUTORY REQUIREMENTS AND/OR POLICIES	
Audit/monitor for consistency with the principles of the Treaty of Waitangi and NZBORA, and ensure intrusions upon tikanga and privacy are minimised, as envisaged by relevant policies or approvals.	Chapter 2 (framework for analysis) in particular, Chapter 11 (known person databank – collection), Chapter 14 (retention)
Audit/monitor the use of forensic DNA phenotyping by Police.	Chapter 6 (forensic DNA phenotyping)
Audit/monitor the collection and use of indirect suspect sampling by Police.	Chapter 9 (reference samples – indirect collection)
Audit/monitor the way in which the CSD is used.	Chapter 10 (Crime Sample Databank), Chapter 14 (retention)
Audit/monitor the collection of profiles for the known person databank.	Chapter 11 (known person databank – collection)
Audit/monitor Police approvals to use the known person databank (or any DNA profile databank) for academic research.	Chapter 12 (known person databank – use)
Audit/monitor the use of familial searching by Police.	Chapter 13 (familial searching)
Audit/monitor the retention, storage and destruction of biological samples and DNA profiles obtained during the course of criminal investigations.	Chapter 14 (retention)

REPORTING	
Collect and publish statistics on the effectiveness of the CSD.	Chapter 10 (Crime Sample Databank)
Collect and publish statistics on ethnicity and the collection of DNA profiles for the known person databank.	Chapter 11 (known person databank – collection)
PUBLIC EDUCATION/ENGAGEMENT	
Promote and publicise further research into DNA transfer, persistence and shedder status.	Chapter 7 (forensic comparisons)
Draft and release public education information on the benefits and limitations of trace DNA.	Chapter 7 (forensic comparisons)
Provide advice to Police on or prepare accessible material for persons asked or required to provide a biological sample to Police for the purpose of casework and/or a databank.	Chapter 8 (reference samples – direct collection), Chapter 11 (known person databank – collection)

15.12 In terms of the powers necessary to perform the identified functions, we note that some could easily be performed without a statutory mandate, for instance, providing advice to ESR and Police where appropriate and promoting public education and engagement. However, statutory powers might be needed to facilitate access to data and other information, to clarify the enforceable or persuasive nature of any advice, approvals or recommendations from the oversight body and to provide procedures for any complaint, review or investigation processes.

THE PERCEIVED BENEFITS

15.13 Police, alongside ESR, has worked hard to self-regulate its use of DNA in criminal investigations, but as has been recognised internationally, it is difficult for any agency involved in the day-to-day operation of a DNA profile databank system to also be responsible for identifying and addressing wide-reaching systemic issues.

15.14 This point was made by the Forensic Genetics Policy Initiative in 2017.[7] The Initiative undertook a seven-year project reviewing DNA profile databank legislation and media coverage from 132 countries. It also undertook widespread consultation, particularly with civil society groups. The aim was to set the human rights standards for forensic DNA databases worldwide, and the project culminated in the publication of best-practice guidance at the end of 2017. On the issue of oversight, the guidance states:[8]

> Best practice for DNA databases includes an independent and transparent system of governance with regular information published (eg annual reports and minutes of oversight meetings). Multi stakeholder governance is preferable, including civil society and experts on genetic privacy. There must be adequate public and regulatory scrutiny to ensure the database is compliant with the law and to maintain public confidence.

7 The Forensic Genetics Policy Initiative is a collaboration of GeneWatch UK, Privacy International and the Council for Responsible Genetics. See <http://dnapolicyinitiative.org>.

8 Forensic Genetics Policy Initiative *Establishing Best Practice for Forensic DNA Databases* (September 2017) at 25.

15.15 This guidance aligns with the following advice on governance given by the Nuffield Council in the United Kingdom over 10 years ago:[9]

> The potential uses and abuses of forensic databases are considerable. Effective governance helps to ensure not only that their utility is maximised, but also that their potentially harmful effects – such as threatening privacy, undermining social cohesion and aggravating discriminatory practices – are minimised. Good governance can anticipate and respond to new challenges; it is not merely a means to impose sanctions once things go wrong. Moreover, open governance can address suspicion and promote support among the public for an enterprise which, after all, is essentially in the public interest.

15.16 The potential benefits of establishing an oversight regime for the use of DNA in criminal investigations in New Zealand include: ensuring public understanding, trust and engagement; maximising the effective and efficient operation of DNA profile databanks; minimising possible societal harms; and facilitating appropriate and timely responses to scientific developments. In addition in the New Zealand context, it is important for an oversight body to consider tikanga and consistency with the principles of the Treaty of Waitangi. An oversight regime that includes Māori in central decision-making roles could be particularly well placed to capitalise on some of these benefits.

15.17 Independent systemic oversight has the potential to decrease the risk of individual miscarriages of justice occurring and the resultant litigation. As explained in Chapter 7, every case that involves a miscarriage of justice comes not only at a huge personal cost to the individuals and families involved but also at a significant cost to society as a whole.[10]

15.18 Furthermore, in relation to some of the issues that we have identified in this issues paper, the alternative options for providing the requisite safeguards include expanding the roles of Parliament and/or the courts. These options also incur cost and may come at the expense of flexibility and timeliness.

OVERSEAS DNA OVERSIGHT BODIES

15.19 Before discussing the pre-existing agencies in New Zealand, it is worth considering the functions and powers of overseas DNA oversight bodies. This is a different lens through which to identify appropriate functions and powers, but by reviewing those functions, we can build a much clearer picture of what the options for effective oversight in New Zealand might look like. In particular, it is useful to consider what is being done in overseas jurisdictions to monitor and address issues of ethnic over-representation in DNA regimes.

The United Kingdom

15.20 The United Kingdom has a complex oversight regime for the National DNA Database (NDNAD).[11] This is an extensive – and somewhat reactive – regime that has developed in part in response to the criticisms by the European Court of Human Rights in *S & Marper v United Kingdom*.[12]

9 Nuffield Council on Bioethics *The forensic use of bioinformation; ethical issues* (September 2007) at [7.1].

10 Note it is difficult to provide a monetary figure of the actual cost estimate.

11 Some of the oversight functions only relate to England and Wales and others to the whole of the UK.

12 *S and Marper v The United Kingdom* [2008] 5 ECHR 167 (Grand Chamber).

15.21 A unit of the United Kingdom Home Office (a ministerial department responsible for immigration, security and law and order) is responsible for the day-to-day operation of the NDNAD.[13] There are five separate public bodies that have overlapping oversight roles. They are:

(a) the Forensic Information Databases Strategy Board (FIND Strategy Board);

(b) the Biometrics and Forensics Ethics Group (BFEG);

(c) the Forensic Science Regulator;

(d) the Commissioner for the Retention and Use of Biometric Material (the Biometrics Commissioner); and

(e) the Information Commissioner.

We briefly discuss each of these below.

The United Kingdom Forensic Information Databases Strategy Board

15.22 The FIND Strategy Board is a statutory body whose principal function is to oversee the operation of the NDNAD.[14] It is constituted by the Home Secretary (the head of the Home Office) and comprises representatives of the National Police Chiefs' Council, the Home Office, the BFEG, the Association of Police and Crime Commissioners, the Forensic Science Regulator, the Information Commissioner's Office, the Biometrics Commissioner, representatives from Police, devolved administrations of Scotland and Northern Ireland and such other members who may be invited.

15.23 The Board's overarching strategic objectives include ensuring the NDNAD is effective and efficient, promoting public awareness of the NDNAD's capabilities, monitoring developments in science and technology so that the NDNAD keeps pace with progress, and ensuring that the NDNAD is operated in an ethical, proportionate and transparent manner. The Board's functions include developing and implementing policies for the DNA databanks, reporting on the operation of the NDNAD, considering applications for research on the databank, overseeing data processes and access protocols to ensure compliance with privacy legislation and human rights law, producing guidelines on early deletion policies, and considering requests from Police to undertake familial searching.[15]

The United Kingdom Biometrics and Forensics Ethics Group

15.24 Ethical issues arising from the operation of the NDNAD are addressed by the BFEG. Central to the BFEG's role is the ability to operate transparently and provide ethical

13 This unit is known as the "National DNA Database Delivery Unit": Information Commissioner's Office and National DNA Database Strategy Board *Governance Rules for the National DNA Database Strategy Board* (Home Office, June 2014) at 1.

14 The National DNA Database Strategy Board – now known as the FIND Strategy Board – was established under the Police and Criminal Evidence Act 1984 (UK), s 63AB. Section 63AB sets out the functions of the Board. The Board's functions were broadened in the 2016–2017 to include governance of the National Fingerprint Database: National DNA Database Strategy Board *Annual Report 2016-2017* (Home Office, July 2018) at 35–36.

15 The objectives and functions of the FIND Strategy Board are set out in its governance rules at 2–3 and 5–7. These include developing and implementing policies and procedures for DNA databanks; reporting on the operation of the NDNAD; considering applications for research on or use of the NDNAD such as for testing new forensic products; overseeing data processes and access protocols to ensure compliance with privacy legislation, human rights law and the Freedom of Information Act 2000; producing guidelines on early deletion policies; and considering requests from Police to undertake familial searching: Information Commissioner's Office and National DNA Database Strategy Board *Governance Rules for the National DNA Database Strategy Board* (Home Office, June 2014) at 5–7.

advice that is independent of government.[16] To achieve this, BFEG is constituted by up to 14 independently appointed experts responsible for considering the ethical impact of the retention and use of biological samples and biometric identifies. The Chair of the BFEG also sits on the FIND Strategy Board to provide input into decisions involving ethical considerations.[17]

15.25 The BFEG's areas of responsibility include providing advice on the implementation of the Protection of Freedoms Act 2012 (UK),[18] reviewing policies regarding the deletion of DNA profiles, tracking the ethical implications of new forensic analysis techniques, monitoring the discriminatory impacts of the NDNAD, developing transparent information regarding the operation of the databanks and advising on the ethical implications of familial searching.[19] Additionally, the BFEG cooperates with the FIND Strategy Board in considering applications for secondary uses of the NDNAD.[20]

15.26 Previous work streams include auditing DNA databases looking at ethnic over-representation,[21] advising on the ethical implications of ethnic inferencing, assessing the impact of the NDNAD on young people and reviewing the regulations surrounding international sharing of DNA profiles.[22]

15.27 The BFEG's work is not limited to reviewing the use of DNA in criminal investigations. It also oversees State use of other biometric and forensic data. For instance, it is currently examining the operation of the national fingerprint database and the adoption of new live facial recognition software by the Metropolitan Police Service.[23]

The United Kingdom Forensic Science Regulator

15.28 The Forensic Science Regulator is an independent public appointee responsible for providing leadership, strategic direction, independent scrutiny and specialist expertise in forensic science in England and Wales.[24] Like the BFEG, the Regulator's mandate is not limited to overseeing the use of DNA in criminal investigations. For instance in 2018, in

16 Formerly known as the National DNA Database Ethics Group. It was replaced by the Biometrics and Forensics Ethics Group (BFEG) on 20 July 2017 with a mandate to more broadly consider ethical issues in relation to biometrics and forensics: Biometrics and Forensics Ethics Group *Terms of Reference, Code of Practice and Working Protocol* (Home Office, April 2017) at 4.

17 Biometrics and Forensics Ethics Group *Terms of Reference, Code of Practice and Working Protocol* (Home Office, April 2017) at 5.

18 This Act was passed in response to the European Court of Human Rights decision in *S and Marper v The United Kingdom* [2008] 5 ECHR 167 (Grand Chamber). The Act was part of the Government's legislative programme to safeguard civil liberties and reduce the burden of government intrusion into the lives of individuals. It includes provisions in respect of the destruction, retention and use of DNA samples.

19 Home Office *Home Office Science Non-Departmental Public Bodies (NDPSs): Triennial Review* (July 2017) at 5–6.

20 Information Commissioner's Office and National DNA Database Strategy Board *Governance Rules for the National DNA Database Strategy Board* (Home Office, June 2014) at 6.

21 This issue was raised in the first report of the group: National DNA Database Ethics Group *1st Annual Report of The Ethics Group: National DNA Database* (Home Office, 2010) at 27. It has since been revisited in several annual reports of the group: see for example National DNA Database Ethics Group *Annual Report of The Ethics Group: National DNA Database* (Home Office, April 2010) at 11–12. In every annual report, the future work plan of the group includes "To continue to monitor and assess potential disproportionate or discriminatory effects that the use and operation of biometric databases may have on ethnic minority groups": see for example National DNA Database Ethics Group *Annual Report of The Ethics Group: National DNA Database* (Home Office, 2016) at 28.

22 See for example National DNA Database Ethics Group *Annual Report 2016* (Home Office, 2016) at 11–24.

23 *Minutes of the Biometrics and Forensics Ethics Group 5 June 2018* (Home Office, BFEG04, June 2018).

24 Home Office "Forensic Science Regulator: About Us" Government United Kingdom Organisations <www.gov.uk/>. The Forensic Science Regulator collaborates with the Scottish and Northern Ireland authorities to set quality standards.

addition to issuing various reports and guidelines concerning DNA, the Regulator issued papers relating to gait analysis, forensic anthropology, forensic pathology and forensic toxicology.[25]

15.29 The Regulator's core function is to ensure that the criminal justice system is governed by quality forensic science standards that are subject to effective oversight.[26] In the DNA sphere, the Regulator has crafted procedures to minimise DNA contamination during crime scene examinations and laboratory analysis, reported on cognitive biases in forensics and developed a Code of Practice for DNA analysis.[27] To ensure effective oversight of the NDNAD, the Regulator also sits on the FIND Strategy Board.[28]

15.30 The Regulator is advised by a number of expert sub-groups, including the Forensic Science Advisory Council and the DNA Analysis Specialist Group. Both sub-groups have roles regarding setting, reviewing and monitoring compliance with the scientific standards that apply to the NDNAD.[29] Significantly, the Forensic Science Advisory Council advises the Regulator on the procedures for validating and approving new forensic science technologies.[30]

The United Kingdom Commissioner for the Retention and Use of Biometric Material

15.31 The Biometrics Commissioner is an independent statutory position responsible for reviewing retention and use of DNA profiles for national security purposes, reviewing police use and retention of biological samples and DNA profiles, deciding applications by Police to retain DNA profiles that would otherwise be required to be destroyed and reporting to the Home Secretary regarding the performance of these functions.[31] The Commissioner has a seat on the FIND Strategy Board in order to provide proactive oversight and to cooperate with the Board in generating policies on the retention and use of biometric material.[32]

25 Forensic Science Regulator *Draft Forensic Gait Analysis Code of Practice* (Home Office, July 2018); Royal Anthropological Institute and Forensic Science Regulator *Code of Practice for Forensic Anthropology* (Home Office, FSR Technical Guidance, May 2018); and Forensic Science Regulator *Codes of Practice and Conduct: for forensic science providers and practitioners in the Criminal Justice System* (Home Office, FRS Codes of Practice and Conduct Issue 4, October 2017).

26 Home Office "Forensic Science Regulator: About Us" Government United Kingdom Organisations <www.gov.uk/>.

27 Forensic Science Regulator *The Control and Avoidance of Contamination in Crime Scene Examination involving DNA Evidence Recovery* (Home Office, FSR-G-206 Issue 1, 2016); Forensic Science Regulator *The Control and Avoidance of Contamination in Laboratory Activities involving DNA Evidence Recovery and Analysis* (Home Office, FSR-G-208 Issue 1, 2015); Forensic Science Regulator *Cognitive Bias Effects Relevant to Forensic Science Examinations* (Home Office, FSR-G-217 Issue 1, 2015); and Forensic Science Regulator *Codes of Practice and Conduct* (Home Office, FSR-C-108 Issue 1, 2014).

28 Information Commissioner's Office and National DNA Database Strategy Board *Governance Rules for the National DNA Database Strategy Board* (Home Office, June 2014) at 3.

29 Forensic Science Regulatory Unit *Terms of Reference for the Forensic Science Advisory Council* (Home Office, June 2012) at [9]–[12]; and Forensic Science Regulatory Unit *Terms of Reference for the DNA Analysis Specialist Group* (Home Office, November 2013) at [2]–[3].

30 Forensic Science Regulatory Unit *Terms of Reference for the Forensic Science Advisory Council* (Home Office, June 2012) at [9].

31 The position of Commissioner for the Retention and Use of Biometrics Material (Biometrics Commissioner) is established under the Protection of Freedoms Act 2012 (UK), s 20. The Commissioner has oversight for the retention and use of biometrics (including DNA profiles and fingerprints) in matters of national security for the whole of the UK but for other criminal matters, the remit is for England and Wales only.

32 Section 63AB(4) of the Police and Criminal Evidence Act 1984 (UK) requires the FIND Strategy Board to issue guidance, on consultation with the Biometrics Commissioner, about the circumstances in which applications may be made to the Commissioner for the retention of a DNA profile that would otherwise be required to be deleted according to statute.

The United Kingdom Information Commissioner

15.32 The Information Commissioner's Office (ICO) is an independent national body responsible for promoting compliance with the Freedom of Information Act 2000.[33] The ICO performs a similar function to the Office of the Privacy Commissioner in New Zealand. Given that privacy interests are heavily engaged by the use of DNA in criminal investigations, the Information Commissioner sits on the FIND Strategy Board. The Commissioner's role on that Board is to ensure that there is compliance with the Data Protection Act 1998 (UK), that privacy considerations are given appropriate weight in Board decisions and that privacy interests are respected so that the "NDNAD retains the confidence of all communities".[34]

Discussion of the United Kingdom model

15.33 The United Kingdom is a much bigger jurisdiction than New Zealand with multiple police forces and forensic laboratories. Its oversight model is complex and has developed in a piecemeal way. The degree of overlap between the various bodies can make it difficult to determine exactly who is responsible for what. Nevertheless, there are some aspects of the model that we think are useful to consider:

(a) The United Kingdom has opted to empower oversight bodies to provide guidance to Police and forensic service providers as opposed to enacting strict legislative regimes to deal with many of these issues.

(b) The oversight bodies primarily deal with systemic matters but on occasion are empowered to deal with specific cases as well.

(c) The mandate of each oversight body is not limited to the use of DNA in criminal investigations. There is overlap with other biometric regimes, other forensic sciences, national security investigations and general privacy law.

Scotland

15.34 Scotland maintains its own DNA database although profiles are also sent to the United Kingdom's NDNAD.[35] Some of the United Kingdom oversight bodies have jurisdiction, so Scotland currently does not operate a stand-alone oversight regime of its database. However, after three reviews in the last 10 years, the Scottish Government has finally accepted the need for increased oversight.

15.35 The three reviews – the 2008 Fraser Review (conducted by an academic), the 2016 HMICS review (conducted by an independent body established to review police forces and policing) and the 2018 IAG review (conducted by an Independent Advisory Group) – all highlighted the need for greater transparency and accountability arrangements to entrench an ethical and human rights-based framework for the use of biometric information in Scottish policing.[36] The 2018 IAG review outlined a proposed oversight regime.[37] The details of the regime are set out below.

33 Freedom of Information Act 2000 (UK), s 47.

34 Information Commissioner's Office and National DNA Database Strategy Board *Governance Rules for the National DNA Database Strategy Board* (Home Office, June 2014) at [5].

35 Scottish Police Authority "Forensic Services" (2015) <www.spa.police.uk/>.

36 In 2008, Professor James Fraser (Director of the Centre for Forensic Science at Strathclyde University and Chair of the European Academy of Forensic Science) was charged with reviewing the operation and effectiveness of Scotland's

Scottish Biometrics Commissioner

15.36 The Scottish Government has accepted in principle the need for a Scottish Biometrics Commissioner to oversee the collection, use and destruction of biometric data.[38] This includes the use of DNA by Police (and other government agencies) but also includes the use of fingerprints, digital facial images and other emerging forms of data.

15.37 Public consultation has been conducted on the proposed functions of the Biometrics Commissioner:[39]

(a) Promoting compliance with independently established standards and codes of practice governing the handing of biometric information.

(b) Reviewing codes of practice and standards to ensure adequate protection of children, vulnerable adults and "protected characteristic groups". Race, including colour, nationality and ethnic or national origin, is a protected characteristic.[40] This indicates that the Commissioner's role could include consideration of over-representation of ethnic minority groups in the collection and use of biometric data, including DNA.

(c) Independently investigating the acquisition, retention, use and disposal of biometric information where ethical or human rights issues are engaged.

(d) Undertaking or assisting in reviews when requested by Parliament or other authorised bodies such as the Chief Constable of Police Scotland.

(e) Issuing 'improvement notices' in response to systemic breaches of established codes of practice. Failure to comply with notices can be reported to Parliament.

(f) Reporting to the Scottish Parliament annually and to international human rights bodies and other bodies where required.

(g) Researching biometric retention policies and collaborating on research into the appropriateness of retention standards.

(h) Having the power to conduct independent case reviews where reviews are referred by the UK Information Commissioner.

legislation governing the collection, use and destruction of forensic DNA samples: James Fraser *Acquisition and Retention of DNA and Fingerprint in Scotland* (University of Strathclyde Glasgow, June 2008). The resultant report led to legislative reform via the Criminal Justice and Licensing (Scotland) Act 2010. One area that was not legislated on was oversight of the DNA system. Following this review, Her Majesty's Inspectorate of Constabularies in Scotland (HMICS) produced a 2016 report addressing Scotland's governance arrangements surrounding the use of biometric data in policing. HMICS also highlighted a lack of oversight and ultimately recommended the creation of a Scottish Biometrics Commissioner role. Finally, in 2017, the Cabinet Secretary for Justice established an Independent Advisory Group to review the use and retention of biometric data and to "seek to establish an ethical and human rights based framework which could be applied to existing, emerging and future biometrics". This review again (amongst other things) recommended the creation of a Scottish Biometrics Commissioner and outlined the proposed list of functions to be performed in this role: *Independent Advisory Group on the Use of Biometric Data in Scotland* (The Scottish Government, March 2018) at 70–77.

37 Independent Advisory Group Report on the Use of Biometric Data: *Scottish Government Response to the Report of the Independent Advisory Group on Biometric Data in Scotland* (March 2018).

38 The Independent Advisory Group Report defined "biometric data" as "any physical, biological, physiological or behavioural data, derived from human subjects that have the potential to identify an individual": *Independent Advisory Group on the Use of Biometric Data in Scotland* (The Scottish Government, March 2018) at 16.

39 As set out in the Scottish Government's Public Consultation Paper: Scottish Government *Enhanced oversight of biometric data: consultation* (July 2018) at [42]. Public consultation closed on 1 October 2018, and the Scottish Government intends to publish a Consultation Response: See <www.gov.scot>.

40 Equality Act 2010 (UK), ss 4 and 9(1).

Scottish Ethics Advisory Group

15.38 Alongside a Biometrics Commissioner, the IAG Report recommended creating an Ethics Advisory Group to promote ethical considerations in the collection, use, retention and destruction of biometric data in policing.[41] The IAG envisaged that the Ethics Advisory Group would cooperate and consult with the Biometrics Commissioner, liaise with other ethics groups, work with the UK BFEG and provide advice on the ethical implications of adopting new technological developments in the biometrics sphere.[42] The Scottish Government accepted these recommendations, stating that such a group would provide a "valuable forum for considering the ethical impact" of the use of biometric data. The Government has committed to consulting with the IAG in late 2018 to begin establishing the group.[43]

Discussion of the Scottish model

15.39 It is notable that Scotland has identified a need for its own independent bodies to oversee the use of DNA in criminal investigations. We are particularly drawn to the proposal that the Biometrics Commissioner would work closely with an ethics group to develop enforceable codes of practice in this area and that the Commissioner would monitor and report on compliance.

Ireland

15.40 Ireland only established a DNA database system in 2014.[44] This followed a comprehensive report by the Irish Law Reform Commission in 2005.[45]

15.41 The Irish legislation enabled the establishment of a DNA profile database and created a legal framework governing the collection, retention, use and destruction of biological samples and DNA profiles.[46] Day-to-day responsibility for database operation was given to Forensic Science Ireland (FSI) – an associated office of the Department of Justice and Equality. FSI had been providing forensic science services to the criminal justice system in Ireland since 1975.

15.42 A central feature of the Irish legislation was the creation of a statutory oversight committee to maintain the "integrity and security" of the DNA database system:[47] the DNA Database System Oversight Committee (Oversight Committee). Its core functions include overseeing:[48]

(a) FSI's arrangements surrounding the receipt, transmission and storage of biological samples;

(b) FSI's procedures for generating DNA profiles and assessing compliance with international quality control and assurance standards;

41 *Independent Advisory Group on the Use of Biometric Data in Scotland* (The Scottish Government, March 2018) at 14.

42 At 73–74.

43 Scottish Government *Enhanced oversight of biometric data: consultation* (July 2018).

44 Criminal Justice (Forensic Evidence and DNA Database System) Act 2014 (Ireland).

45 Law Reform Commission of Ireland *The Establishment of a DNA Database* (LRC 78-2005, November 2005).

46 Criminal Justice (Forensic Evidence and DNA Database System) Act 2014 (Ireland).

47 Criminal Justice (Forensic Evidence and DNA Database System) Act 2014 (Ireland), s 72(1).

48 Criminal Justice (Forensic Evidence and DNA Database System) Act 2014 (Ireland), ss 71–74.

(c) the measures employed by FSI to ensure that DNA profiles and information are only used for permitted purposes, are not improperly disclosed to third persons and are not accessed except where access is permitted under the legislation;

(d) the reporting of database search results to the Garda Síochána (Police service for the Republic of Ireland), the Ombudsman and the coronial services;

(e) the destruction of biological samples and the removal of DNA profiles;

(f) the use of automated searching and DNA profile comparison and police cooperation; and

(g) international DNA profile sharing arrangements.

15.43 Alongside these oversight functions, the Oversight Committee is also empowered to make recommendations regarding the management and operation of the DNA database system to the Director of FSI or the responsible Minister[49] and, upon request by the Minister, to review any matter relating to the DNA database system.[50]

15.44 The Oversight Committee consists of six members appointed by the Minister for a four-year term, with an equal balance of males and females so far as practicable. The chairperson must be a sitting or former judge of the High Court or the Circuit Court. The members must include the Director of FSI and the Data Protection Commissioner (or their representative). The Minister must then consider the qualifications and expertise of other potential members in the fields of science, human rights or any other field the Minister considers appropriate.[51]

Discussion of the Irish model

15.45 The Oversight Committee shares some similarities with the FIND Strategy Board in the United Kingdom. Both are statutory bodies established for the sole purpose of overseeing the use of DNA in criminal investigations, and both have a range of members representing different stakeholders. The Oversight Committee appears to provide slightly more independent oversight as the Director of the FSI is the only member involved in the day-to-day operation of the DNA database system. The fact that the chairperson must be a sitting or former judge is also of note.

Canada

15.46 In Canada, two separate bodies oversee the operation of the National DNA Data Bank (NDDB) at a federal level. Oversight is primarily provided by the NDDB Advisory Committee. Privacy interests are overseen by the Office of the Privacy Commissioner.

Canadian National DNA Data Bank Advisory Committee

15.47 The NDDB Advisory Committee is a statutory body established to provide advice on its own motion or following a request from the Commissioner of the Royal Canadian

49 Criminal Justice (Forensic Evidence and DNA Database System) Act 2014 (Ireland), s 72(3).

50 Criminal Justice (Forensic Evidence and DNA Database System) Act 2014 (Ireland), s 72(4).

51 Criminal Justice (Forensic Evidence and DNA Database System) Act 2014 (Ireland), Schedule 1.

Mounted Police on "any matter related to the establishment and operation of the National DNA Data Bank".[52]

15.48 The Advisory Committee consists of a chairperson, a vice-chairperson, a representative of the Office of the Privacy Commissioner and up to six other members who may include representatives of the police, legal, scientific and academic communities. The members are appointed by the Solicitor General of Canada for five years and can be reappointed at the expiry of their term.

15.49 The broad oversight and advisory role of the Advisory Committee enables it to carry out a wide range of functions to maintain the integrity of the NDDB system. Some of its previous work streams include training police and court personnel on proper procedures for collecting samples; adopting and implementing new processes and technologies such as robotic workstations, testing kits and DNA database software; carrying out assessments of the privacy implications of the NDDB in conjunction with the Privacy Commissioner; and approving recommendations regarding the use of new DNA analysis techniques.[53] The Advisory Committee has also undertaken long-term projects such as promoting research into the probative value of forensic DNA and the role it plays in promoting public safety.

Canadian Office of the Privacy Commissioner

15.50 The Office of the Privacy Commissioner in Canada is very similar to its New Zealand counterpart. The Office oversees compliance with Canada's privacy law framework to ensure individual privacy is protected.[54] The Commissioner is empowered to carry out privacy studies, as referred by the Minister of Justice, relating to individual privacy, privacy rights and the collection of personal information. Canada's Privacy Act encompasses information-handling practices of government departments, and as such, it includes the actions of federal police when collecting DNA evidence.[55] Consequently, the Commissioner has been involved in overseeing privacy interests in the DNA sphere. This work has included consulting on the privacy implications of forensic DNA analysis,[56] submitting on amendments to the DNA Identification Act[57] and considering the privacy issues engaged by practices such as covert collection, cross-matching and finding unexpected secondary information in a DNA sample.[58]

52 The National DNA Data Bank Advisory Committee was created pursuant to regulations issued by the Governor General under the DNA Identification Act 1998 c 37, s 12(e). The Committee's purpose is set out in the DNA Data Bank Advisory Committee Regulations 2000, reg 5.

53 National DNA Data Bank Advisory Committee *2014-2015* (October 2015).

54 The Office of the Privacy Commissioner was created under the Privacy Act RSC 1985 c P-21, s 53. Primarily, the Commissioner oversees compliance with the Privacy Act and the Personal Information Protection and Electronic Documents Act SC 2000 c 5.

55 Privacy Act RSC 1985 c P-21, sch 1.

56 Office of the Privacy Commissioner of Canada "Obtaining and Banking DNA Forensic Evidence: Response by the Office of the Privacy Commissioner of Canada to the Department of Justice's Consultation Paper" (January 1995) <www.priv.gc.ca/en>.

57 See for example Office of the Privacy Commissioner of Canada "Submission to the House of Commons Standing Committee on Finance on Part IV, Bill C-43 the Economic Action Plan 2014, No 2" (November 2014).

58 Office of the Privacy Commissioner of Canada "Data at Your Fingertips Biometrics and the Challenges to Privacy" (February 2011) <www.priv.gc.ca/en>.

Discussion of the Canadian model

15.51 Like the Information Commissioner in the United Kingdom and the Data Protection Commissioner in Ireland, the Privacy Commissioner in Canada plays a central role in overseeing the use of DNA in criminal investigations. As with those jurisdictions, Canada has also established a multi-disciplinary oversight committee including some members who have been involved in day-to-day operational matters and others who have not. Unlike the other jurisdictions, however, Canada has opted to give its Advisory Committee a very broad unstructured mandate. This approach promotes flexibility but may lack certainty.

Australia and the United States

15.52 Australia and the United States both have a complex and overlapping array of oversight mechanisms largely due to their federal systems and multi-tiered divisions of responsibility. Their models are therefore less useful as comparators, and we have only included a short discussion below.

Australia

15.53 Australia operates a National Criminal Investigation DNA Database (NCIDD) that crosses state and territorial boundaries. The Australian Criminal Intelligence Commission (ACIC) is responsible for running the NCIDD.[59] In doing so, it provides a degree of oversight over the state and territorial DNA database systems.

15.54 External oversight of the ACIC and the NCIDD is provided by bodies such as the Federal Privacy Commissioner, the Parliamentary Joint Committee on Law Enforcement, the Inter-Governmental Committee on the ACIC and the Commonwealth Ombudsmen, and through the vehicle of judicial review.[60] This system is complex and involves intersecting responsibilities and functions.

15.55 The Australian system is further complicated by separate state-centric oversight mechanisms. Often states and territories have enacted separate legislation governing the handling of genetic information, and have created independent Ombudsman and Privacy Commissioners to oversee the actions of government departments and police services within these jurisdictions.[61] Complaints can be directed to these state oversight bodies or to the national oversight bodies. This creates a complex and multi-tiered oversight regime.

United States

15.56 The United States' system also contains both federal and state level DNA profile databases and oversight bodies. The Federal Bureau of Investigation (FBI) operates the Combined DNA Index System (CODIS), which enables "federal, state, and local forensic laboratories to exchange and compare DNA profiles electronically".[62] One wing of CODIS

59 Australian Criminal Intelligence Commission "About Us" (6 September 2018) <www.acic.gov.au/>.

60 Australian Criminal Intelligence Commission "About Us: Governance" (6 September 2018) <www.acic.gov.au/>.

61 Australian Law Reform Commission *Essentially Yours: The Protection of Human Genetic Information in Australia* (ALRC R96, 2003) at [43.48]–[43.49].

62 Federal Bureau of Investigation "Combined DNA Index System (CODIS) Overview" (27 April 2018) <www.fbi.gov/>.

is the National DNA Index System (NDIS), which contains the DNA profiles contributed by participating states.[63]

15.57 Strict statutory conditions are imposed on states participating in NDIS to ensure a consistent level of federal oversight. These conditions require participating states to comply with quality assurance standards set down by the FBI Director, require state laboratories to be accredited and undergo regular external audits and require that access to DNA samples and profiles be governed by federal rather than state law.[64] Audits are conducted by the Office of the Inspector General of the US Department of Justice (OIG), and the auditing results are reviewed and reported on by the FBI Director.[65] Ongoing oversight is also secured through the statutory requirement that the FBI Director must consider recommendations by the Scientific Working Group on DNA Analysis Methods and issue revised quality assurance standards where necessary.[66]

15.58 Individual states have also enacted legislation governing DNA databases at a state level. Participating states must comply with the above statutory requirements to access NDIS. Failure to comply may result in the state being barred from accessing the NDIS system.[67] Consequently, state and federal DNA database law can conflict. Oversight is therefore complicated as state and federal systems may have separate oversight regimes adjudicating compliance based on conflicting legal frameworks.

Other countries

15.59 It is also worth briefly mentioning the oversight bodies that have been established in Portugal and South Korea.[68] In Portugal, an Independent Supervisory Board consisting of three members oversees its DNA profile database and reports directly to Parliament. In South Korea, the Managing Committee of the DNA Identification Database, consisting of seven to nine members, provides its opinions to the Prosecutor General and/or Commissioner of Police. The members consist of public officials, academics and others with expertise in ethics, the social sciences, law and/or journalism. They may request data from the Prosecutor General or Police to assist them in their work. These models provide ideas on how independence, breadth of experience and the importance of data could be reflected in New Zealand oversight options.

EXISTING NEW ZEALAND BODIES

15.60 In keeping with the SSC's guidance, after identifying the new functions and powers needed, the next step is to determine whether a pre-existing body is capable of undertaking them. SSC advises that it is usually more effective to allocate new functions and powers to an existing body than it is to create a new one.

63 34 USC § 12592.

64 34 USC § 12592(b).

65 34 USC § 12593.

66 34 USC § 12591.

67 34 USC § 12592(c).

68 Lei Aprova a criação de uma base de dados de perfis de ADN para fins de identificação civil e criminal 2008 (Portugal), Arts 29-30 and Act on Use of and Protection of DNA Identification Information 2010 (South Korea), art 14 as cited in Forensic Genetics Policy Initiative *Establishing Best Practice for Forensic DNA Databases* (September 2017) at Annex P.

15.61 However, as noted above, two criteria must be met before expanding an existing body's mandate. First, it must be "fit for purpose" in that it must possess the necessary skills and qualities to achieve effective oversight.[69] Second, the agency must be capable of performing the required role without jeopardising its existing functions.[70]

15.62 With that in mind, we have identified the following bodies as potential candidates:

(a) The ESR Strategic Scientific Advisory Panel / Stakeholder Reference Group.

(b) The Privacy Commissioner.

(c) The Independent Police Conduct Authority.

(d) The Human Rights Commission.

(e) The (proposed) Criminal Cases Review Commission.

Oversight functions

15.63 Before discussing each of these existing bodies, we summarise the oversight functions identified so far in this chapter. These functions fall into five broad categories:

(a) Responding to requests or applications from operational agencies.

(b) Undertaking investigations or reviews, including responding to complaints.

(c) Consulting on, or approving, operational policies.

(d) Conducting audits, monitoring compliance and reporting.

(e) Building public trust and engagement.

15.64 To perform these functions, any oversight body or bodies would need a broad range of expertise – in tikanga, science, ethics, privacy, Treaty of Waitangi, human rights, criminal law and procedure, and communications.

15.65 Tikanga expertise is particularly important to ensure that whakapapa information (which is a taonga) collected by the State is protected in keeping with the principle of active protection under the Treaty.[71] This includes the whakapapa information contained within biological samples and DNA profiles stored on the databanks.

15.66 As explained throughout this issues paper, there are significant issues around this information being collected from more people and retained for longer than is necessary for law enforcement purposes. There are also risks surrounding inappropriate use of this information. In recognition of the principles of rangatiratanga, partnership and equity under the Treaty, we consider that an important feature of any oversight regime in New Zealand will need to be providing a central role for Māori and ensuring that Māori have an active voice in all governance decisions.

15.67 We now turn to discuss whether each of the six bodies identified could perform these functions. This discussion is based on the structural nature of each body and the focus of its existing duties and powers.

69 State Services Commission *Reviewing the Machinery of Government* (February 2007) at [76].

70 At [76].

71 For example, there is a process under Te Ture Whenua Māori Act 1993 for matters of tikanga to be referred to the Māori Land Court by, among others, the Minister of Māori Affairs. See sections 29, and 31–32, See Te Ture Whenua Māori Act 1993, ss 29 and 31–32. In addition, section 61 enables the Māori Appellate Court to consider any question of tikanga put to it by the High Court. See for example: *Takamore v Clarke* [2012] NZSC 116, [2013] 2 NZLR 733, at [95] and *Hauraki Māori Trust Board v Treaty of Waitangi Fisheries Commission* [1995] 2 NZLR 702.

ESR's Advisory Panel and Reference Group

15.68 ESR is a Crown Research Institute and Police's forensic science service provider, but it also provides science services and research capability across several other science disciplines. This includes providing services and conducting research in relation to public health, water and environmental matters and food and product safety. To assist it to perform these varied functions, ESR has established a Strategic Scientific Advisory Panel (SSAP) and a Stakeholder Reference Group (SRG).

15.69 To understand the roles of the SSAP and the SRG, it is helpful to set out ESR's governance structure. ESR is governed by a Board of Directors, which is accountable to two shareholding Ministers: the Minister of Research, Science and Innovation and the Minister of Finance.[72] The Board is advised by the SSAP, which comprises four experts and academics and is responsible for providing "independent, expert advice to the Board on research, development and future scientific initiatives that are aligned to ESR's core purpose".[73] The SRG also provides advice to the ESR Board and includes representatives from Police, the Ministry of Health and the Ministry for Primary Industries.

Overlap with DNA oversight functions

15.70 The SSAP has significant scientific expertise. As such, it is well placed to advise ESR on the use of new forensic technologies and DNA analysis techniques and to promote and publicise new research into DNA. It is also independent of the ESR Board. In theory the SSAP, the SRG and a sub-committee of the ESR Board could be reorganised to some extent to allow them to work collectively, in a similar manner to the FINDS Board in the United Kingdom, to oversee the DNA profile databank regime.

Limitations

15.71 The ESR Board and the SRG are not independent. Therefore much of the work of providing transparent oversight under this option would fall to the SSAP. Currently, the SSAP appears to focus heavily on research and business development across the full spectrum of ESR's work. Any shift towards providing operational oversight of the forensic services ESR provides to Police would significantly undermine the SSAP's current role. Furthermore, all of the current SSAP members are from overseas, which may pose a problem for ensuring that cultural issues specific to New Zealand, in particular tikanga and Treaty consistency issues, are appropriately addressed.

Privacy Commissioner

15.72 The Privacy Commissioner is charged with fostering a climate in which the information privacy principles contained in the Privacy Act 1993 are respected and personal information is adequately protected.[74] The Commissioner's core statutory functions fall into the following six categories:[75]

72 The Institute of Environmental Science and Research *Annual Report* (October 2017) at 74–77.

73 The Institute of Environmental Science and Research *Annual Report* (October 2017) at 75.

74 Office of the Privacy Commissioner "About Us" (2013) Privacy Commissioner Te Mana Mātāpono Matatapu <www.privacy.org.nz/>.

75 Privacy Act 1993, s 13.

(a) Public education and engagement: promoting awareness of New Zealand's information privacy framework through education and publicity.[76]

(b) Monitoring: at an agency's request, auditing personal information held by the agency to determine if is maintained in accordance with the Act; monitoring the use of unique identifiers; and monitoring and inquiring generally into any matter that appears to infringe the privacy of the individual.[77]

(c) Research and review: responsibility for examining proposed legislation that enables the collection or disclosure of personal information and any legislation or policy that may affect privacy generally.[78] The Commissioner is also required to research and monitor developments in the interface between technology and privacy.[79]

(d) Consultation and recommendations: making recommendations to agencies as to how to better protect the privacy of the individual; suggestions to any person regarding the need for action in the interests of privacy; and providing advice to Ministers or agencies on any matter relevant to the operation of the Act.[80]

(e) Reporting: periodically reporting to the Prime Minister (with or without a request) on a number of matters, including the acceptance of international privacy instruments, general matters concerning individual privacy including the need for reform and any other privacy matters to which the Prime Minister's attention ought to be drawn;[81] and reporting to the responsible Minister on a range of other privacy matters.[82]

(f) Complaints: investigating and attempting to resolve complaints by individuals of privacy breaches causing harm.

15.73 There is currently a Privacy Bill before Parliament that, if passed, will repeal and replace the Privacy Act 1993.[83] The functions of the Privacy Commissioner would remain substantially the same as those outlined above, although one new power is of note: the proposed ability for the Privacy Commissioner to issue a compliance notice requiring an agency to do something, or stop doing something, in order to comply with the Privacy Act.[84] The Bill provides that the Human Rights Review Tribunal would have the power to enforce compliance notices and hear any appeals.[85]

Overlap with DNA oversight functions

15.74 As discussed throughout this issues paper, there is significant overlap between the use of DNA in criminal investigations and privacy law. For example, we identified privacy concerns in relation to forensic DNA phenotyping, the adoption of new DNA analysis techniques, mass screening, indirect suspect sampling, the retention of biological samples and DNA profiles (particularly on the Crime Sample Databank), collection criteria for the

76 Privacy Act 1993, s 13(1)(a).

77 Privacy Act 1993, ss 13(1)(b)–(c), (e) and (m).

78 Privacy Act 1993, ss 13(1)(f) and (o).

79 Privacy Act 1993, s 13(1)(n).

80 Privacy Act 1993, ss 13(1)(c) (k) and (l).

81 Privacy Act 1993, ss 13(1)(c) and (p)–(r).

82 Privacy Act 1993, ss 13(1)(n) and (o).

83 The completed report of the select committee is scheduled for 13 March 2019.

84 Privacy Bill 2018 (34-1), cl 124.

85 Privacy Bill 2018 (34-1), cl 130.

known person databank, international data sharing, academic research and familial searches.

15.75 Many of the oversight functions that we have identified in this chapter could be performed by the Privacy Commissioner – in particular, those related to consultation or approval of Police and ESR policies, auditing, monitoring and reporting.

15.76 In 2009, the (then) Privacy Commissioner recognised the potential benefits of increased oversight of the use of DNA in criminal investigations and the role her Office could play.[86] In her submission to the select committee considering the 2009 CIBS Amendment Bill, the Privacy Commissioner put forward two different options for an enhanced oversight role:

(a) Strengthening the Privacy Commissioner's auditing function. As the Commissioner can currently only undertake an audit of an agency's compliance with the information privacy principles at the request of the agency itself, the Commissioner suggested that she could be given "the power to require the Police or ESR to carry out audits, either at my request or on a regular basis".

(b) Creating an independent oversight committee. The Commissioner suggested that the committee could be chaired by a judge; could include representatives from key statutory watchdogs such as the Office of the Privacy Commissioner, the Independent Police Conduct Authority and the Human Rights Commission; and could include experts in the fields of criminal justice, genetic ethics and science.

15.77 The Commissioner expressed a preference for the latter approach as it would have the advantage of responding to a wider set of issues than a simple audit, such as new legal, scientific and ethical developments.

Limitations

15.78 The Privacy Commissioner's preference for an independent oversight committee reflects the main limitation of the Commissioner being the sole DNA oversight body. Effective oversight would require expertise beyond privacy law. Another limitation is that, outside of public education, the Privacy Commissioner's role is presently a reactive and advisory role. Although this may change if the compliance notice regime in the Privacy Bill is enacted, further amendments to the Privacy Commissioners' powers would be required to enable the Commissioner to provide some of the functions identified above, for example, a power to determine applications from ESR or Police to undertake investigative actions or to use new DNA analysis techniques. It may instead be preferable to empower an oversight committee to perform those functions, rather than the Privacy Commissioner alone. It is also questionable whether the Privacy Commissioner is appropriately placed to assess consistency with tikanga or the principles of the Treaty of Waitangi.

Independent Police Conduct Authority

15.79 The Independent Police Conduct Authority (IPCA) is an independent oversight body whose core statutory function is to investigate and resolve complaints about Police misconduct or neglect of duty and Police practices, policies and procedures.[87] To perform

[86] Privacy Commissioner "Submission to the Justice and Electoral Committee on the Criminal Investigations (Bodily Samples) Amendment Bill 2009".

[87] Independent Police Conduct Authority Act 1988, s 12. Complaints may be made by individuals, or if death or serious harm has occurred from Police conduct, the IPCA may of its own motion investigate the matter. (Under section 13, the

this function, the IPCA has broad investigatory powers. At the end of any investigation, the IPCA must form an opinion as to whether any act, omission or other matter that it investigated was "contrary to law, unreasonable, unjustified, unfair, or undesirable".[88] It must then convey its opinion, alongside any recommendations, to the Commissioner of Police. The Commissioner must respond as soon as reasonably practicable to the IPCA's recommendations. If the IPCA considers that the Commissioner's response is inadequate or inappropriate, it may refer the matter on to the Attorney-General and the Minister of Police, along with a report for tabling in Parliament.[89]

Overlap with DNA oversight functions

15.80 The current functions of the IPCA overlap with the suggested complaints function of the DNA oversight regime. Complaints regarding non-compliance with the statutory framework could be heard and addressed by the IPCA. For example, the IPCA could consider and determine any complaint about inappropriate use of forensic DNA phenotyping or use of the elimination sampling regime when the suspect sampling regime would have been more appropriate.

15.81 More broadly, the IPCA's power to hear complaints on Police practices, policies or procedures affecting the complainant could provide some general oversight.[90] The IPCA could provide a viable forum for resolving complaints surrounding the manner in which police officers obtain consent from suspects before obtaining their DNA; the use of mass screening, familial searching and indirect suspect sampling techniques; and the retention, storage and destruction of DNA profiles and biological samples.

15.82 Consultation and policy approval may also fall within the scope of the IPCA's role. For instance, following past investigations, the IPCA has drafted policy recommendations on issues such as Police pursuit practices, pre-charge warnings and the use of excessive force.[91] This power may enable the IPCA to consult with Police on DNA policies.

Limitations

15.83 A significant limitation of the IPCA as a DNA oversight body is that its work is currently complaint based. With the exception of incidents involving serious harm or death, the IPCA can only conduct an investigation if an individual complains about something that they claim has adversely affected them in their personal capacity. Unless its functions were broadened, the IPCA would not be able to proactively consult or approve Police policies as recommendations can only be made to Police following the completion of a formal investigation.[92] Similarly, the IPCA would not be able to carry out case-specific approvals or approve the use of new technologies or techniques. Given that the IPCA's

Commissioner of Police must notify the IPCA of the incident.) See also Independent Policy Conduct Authority "Why Police Oversight Matters" (2017) <www.ipca.govt.nz/>.

88 Independent Police Conduct Authority Act 1988, ss 27–28.

89 Independent Police Conduct Authority Act 1988, ss 27–29.

90 Independent Police Conduct Authority Act 1988, s 12(1)(a)(ii).

91 Independent Police Conduct Authority *Death of Calum Meyer following Police Pursuit in Whanganui* (March 2016); Independent Police Conduct Authority *Review of Pre-Charge Warnings* (IPCA: 14-2165, September 2016); and Independent Police Conduct Authority *Complaint of Excessive Force Following Arrest in Hokitika* (IPCA: 14-2150, October 2016).

92 Independent Police Conduct Authority Act 1988, ss 27–28.

structure is reactive, it is not conducive to the kind of systemic oversight that may be required.

15.84 Like the Privacy Commissioner, the IPCA also may not have sufficient multi-disciplinary expertise to perform all of the oversight functions we have identified. Its expertise in privacy, human rights, criminal law and procedure and in-depth knowledge of policing would be highly valuable. However, it may not provide the ethical, scientific and tikanga expertise and Māori representation that would be required.

Human Rights Commission

15.85 The Human Rights Commission is a statutory body responsible for promoting and protecting human rights within New Zealand.[93] The Human Rights Act 1993 outlines the Commission's primary functions in pursuit of this objective, which include promoting human rights, equality and diversity in all spheres of life. In meeting its primary functions, the Commission has further functions. The following are particularly relevant:

(a) Issuing public statements that promote understanding and compliance with New Zealand's human rights framework.[94]

(b) Promoting a better understanding of the human rights dimension of the Treaty of Waitangi through research, education and discussion.[95]

(c) Preparing and publishing guidelines and codes of practice for the avoidance of acts or practices that may be inconsistent with, or contrary to, the Human Rights Act.[96]

(d) Receiving and inviting representations from the public on human rights matters.[97]

(e) Inquiring into any matter, enactment, law, practice or procedure that appears to infringe human rights.[98]

(f) Receiving complaints of unlawful discrimination, including by government agencies, and resolving those disputes.[99]

Overlap with DNA oversight functions

15.86 The Human Rights Commission has expertise in human rights and a deep understanding of the cultural landscape in New Zealand and the role of the Treaty of Waitangi. Those would be highly valuable qualities in any DNA oversight body.

15.87 Monitoring the use of techniques such as forensic DNA phenotyping and familial searching could fall within the scope of the Commission's broad inquiry powers. The Commission could inquire into whether these techniques have any discriminatory impact and could provide advice on how best to mitigate any cognitive bias and racial profiling. The Commission's power to issue guidelines and codes of practice could also be used in a similar way.

93 See Human Rights Act 1993, s 5.

94 Human Rights Act 1993, s 5(c)–(ca).

95 Human Rights Act 1993, s 5(d).

96 Human Rights Act 1993, s 5(e).

97 Human Rights Act 1993, s 5(f).

98 Human Rights Act 1993, s 5(h).

99 See Parts 1A, 2 and 3 of the Human Rights Act 1993.

Limitations

15.88 The limitations with the Human Rights Commission acting as the main DNA oversight body are similar to those we have identified with the Privacy Commissioner and the IPCA. By definition the focus of the Human Rights Commission is on human rights (particularly unlawful discrimination) which mean it may not be well placed to provide the kind of multi-disciplinary and systemic oversight of the use of DNA in criminal investigations that may be necessary. It would also need to ensure that it had the capacity to assess tikanga issues arising.

Proposed Criminal Cases Review Commission

15.89 The final agency that we have identified with an overlapping interest is the proposed independent Criminal Cases Review Commission (CCRC).

15.90 The Criminal Cases Review Commission Bill was introduced in September 2018.[100] If passed, it would establish a Commission to review alleged miscarriages of justice to decide whether to refer them back to an appeal court.[101] A referral would normally require "something new" in the form of evidence or argument not previously considered by the relevant appellate court.[102]

15.91 The Bill proposes that the key features of the Commission would be to:[103]

- receive applications from eligible persons or their authorised representatives;
- carry out the activities it considers necessary to make its functions known to, and understood by, the public;
- have the ability to undertake initial inquiries into a conviction or sentence on its own motion, if those inquiries are in the public interest;
- undertake thematic inquiries into a practice, policy, procedure or other general matter it considers to be related to miscarriages of justice;
- have reasonable powers to obtain information relevant to the investigation from any person;
- regulate its own policies and procedure in a manner that is consistent with the rules of natural justice; and
- appoint specialist advisers to give advice in relation to scientific, technical or other matters involving particular expertise.

15.92 The proposed CCRC draws on the experience of similar independent bodies in the United Kingdom, Scotland and Norway.[104]

100 Criminal Cases Review Commission Bill 2018 (106-1).

101 Criminal Cases Review Commission Bill 2018 (106-1), cl 3.

102 Criminal Cases Review Commission Bill 2018 (106-1) (explanatory note) at 2. The completed report of the select committee is scheduled for 25 April 2019.

103 Criminal Cases Review Commission Bill 2018 (106-1) (explanatory note) at 2–3 and 6.

104 Criminal Cases Review Commission Bill 2018 (106-1) (explanatory note) at 1. See cl 17 for the grounds that must be considered for referring a conviction or sentence to an appeal court.

Overlap with DNA oversight functions

15.93 If it were established, the CCRC would be well positioned to review individual cases where convictions are solely based on DNA evidence. These reviews could be initiated in response to an application by a convicted person or by the CCRC on its own motion. If the CCRC identified any systemic issue arising from the way DNA evidence is presented at trial, it could initiate a thematic inquiry as well. There is even scope for the CCRC to conduct public education campaigns. It could also monitor any requests to Police from convicted offenders for any crime scene samples to be re-analysed. These functions would align with the CCRC's overall purpose and would be unlikely to detract from its other non-DNA-related work.

Limitations

15.94 Given its likely focus on reviewing individual cases once ordinary criminal proceedings have concluded, the CCRC would probably only be able to perform four of the functions identified in Table 1 at the start of this chapter. It would be a major deviation from its likely mandate (and a potential conflict of interest) to pre-approve any investigative actions in specific cases or to formally pre-approve Police and ESR policies. Again, it would need to ensure that it had the capacity to assess consistency with tikanga and the Treaty of Waitangi. A consultation role, however, might be more feasible.

DISCUSSION

Dividing the functions between existing bodies

15.95 As explained above, there is potential for some of the oversight functions to be performed by one or some of the existing bodies we have discussed – the Privacy Commissioner, the IPCA, the Human Rights Commission and/or the proposed CCRC.

15.96 However, we consider that none of these existing bodies could provide the full range of functions that may be necessary, even if their functions and powers were amended. That is primarily because their structures do not accommodate the necessary tikanga, scientific and ethical expertise that would be required or the specific representation of Māori interests. Dividing the oversight functions amongst existing bodies also means that there would be no one body with a 'bird's-eye view' of the use of DNA in criminal investigations, and as we have noted throughout this issues paper, in light of the disproportionate impact that the DNA regime has on Māori and upholding the Treaty principles of partnership, rangatiratanga and equity, Māori should have a central role in any oversight functions.

Independent oversight committee

15.97 One option that may be cost-effective is an independent oversight committee, as put forward by the Privacy Commissioner in 2009. This could operate in a similar way to the FINDS Strategy Board in the United Kingdom, the Oversight Committee in Ireland or the Advisory Committee in Canada. A committee would not require the establishment of an entirely new agency with the set-up and administration costs that would entail. Instead, the committee could consist of members who work in existing government and non-government agencies who would meet periodically to perform the oversight functions. The members could include representatives from agencies such as Te Mana Raraunga

(Māori Data Sovereignty Network)[105] and the Royal Society Te Apārangi,[106] alongside representatives from the existing bodies identified above. The committee could be supported by a Ministry of Justice secretariat and/or an independent ethics group.

15.98 Such an approach is not entirely new in New Zealand. Although operating in a different context, the Advisory Committee on Assisted Reproductive Technology (ACART) is an example of this model.[107] The ACART is a Ministerial advisory committee with broad powers including:[108]

(a) issuing guidelines on new research procedures;

(b) advising the Minister of Health regarding the need for reform to prohibit, or provide for, certain reproductive procedures or research, advising on whether new scientific procedures should be introduced based on international studies, research and ethical considerations; and advising on the need to ban certain practices;

(c) consulting with persons in the health sector where required; and

(d) cooperating with the Ethics Committee (see below) on certain ethical aspects of the use of DNA in criminal investigations.

15.99 The ACART consists of eight to 12 members appointed by the Minister of Health. The empowering legislation identifies seven areas of expertise that must be represented on the Committee.[109] This includes a requirement to have "1 or more Māori members with expertise in Māori customary values and practice and the ability to articulate issues from a Māori perspective".[110] In our view and given the disproportionate representation of Māori in criminal justice statistics, one or more Māori members would be insufficient in the DNA context.

Establishing a new body or bodies

An ethics committee

15.100 The involvement of an ethics committee may be beneficial when it comes to the use of DNA in criminal investigations, as demonstrated by the BFEG in the United Kingdom and the soon to be established ethics group in Scotland. Such a committee could be responsible for ethical issues arising from the operation of the DNA databanks, for example, reviewing policies regarding the deletion of DNA profiles, tracking the ethical implications of new forensic analysis techniques, monitoring the discriminatory impacts of the databanks, developing transparent information regarding the operation of the databanks and advising on the ethical implications of familial searching. Given the disproportionate representation and the associated disproportionate impact of the DNA regime on Māori, an ethics committee could be structured to require a specific number of members to represent Māori interests.

105 For a discussion of Te Mana Raraunga and its charter, see Chapter 12.

106 An independent, statutory not-for-profit body providing policy advice on scientific issues.

107 Human Assisted Reproductive Technology Act 2004, ss 32–42.

108 Human Assisted Reproductive Technology Act 2004, s 35.

109 Human Assisted Reproductive Technology Act 2004, s 34(4).

110 Human Assisted Reproductive Technology Act 2004, s 34(4)(d).

A kaitiaki role

15.101 As explained in Chapter 12, there are risks associated with designing an oversight regime that takes into account Māori interests by requiring an ethics committee or an oversight committee to have a specific number of Māori members. While any committee should have the capacity to consider Māori interests, if the committee is designed to operate on a consensus basis, Māori members may feel routinely pressured to compromise. On some issues, particularly those arising from the collection of ethnicity data and approving academic research on the known person databank, it may be appropriate to establish either a standing or an ad hoc group with a kaitiaki role to provide accountability and support for the Māori members of the committee and with the power to approve or veto use of Māori data.

15.102 In Chapter 12, we discussed, as an example of such a group, the National Kaitiaki Group which considers and grants applications to disclose, use or publish information held on the National Cervical Screening Register that belongs to Māori women.[111] This "protected information" cannot be dealt with, unless approved by the Kaitiaki Group. The group is made up of three to six members appointed by the Minister upon consultation with others including the Ministers of Māori Affairs and Women's Affairs and any other person considered appropriate.[112]

15.103 Adopting a similar approach in relation to the use of DNA information belonging to Māori would help to mitigate the risk identified above with consensus decision making. It would also recognise the current over-representation of Māori on the databank and uphold the principle of rangatiratanga.

A new Commissioner

15.104 A further option is to establish a new Commissioner/Regulator in New Zealand. This option might be considered appropriate if there were a view that increased oversight was also required in relation to overlapping government practices such as:

(a) the use of all forensic sciences in criminal investigations (in addition to DNA analysis) including the use of fingerprint, blood pattern, hair, ballistic and footprint analysis;

(b) the use of biometrics generally by the State (which would include the collection and retention of digital images, fingerprints and iris scans by agencies such as the Department of Corrections, the New Zealand Customs Service and Immigration New Zealand as well as Police); and/or

(c) the use of any new technologies by Police that enables some form of public surveillance (which would include use of the DNA profile databanks but also practices such as CCTV and social media monitoring).[113]

15.105 If this option were considered appropriate, the Forensic Science Regulator or the Biometrics Commissioner in the United Kingdom could serve as useful models. However, we note that our terms of reference do not extend beyond the use of DNA in criminal investigations.

111 The Kaitiaki Group was established pursuant to the Health (Cervical Screening (Kaitiaki)) Regulations 1995, regs 6–10.

112 Health (Cervical Screening (Kaitiaki)) Regulations 1995, reg 7.

113 Various issues arising from increased public surveillance by Police are the subject of Chapter 11 in our recent report: Law Commission *Review of the Search and Surveillance Act 2012: Ko te Arotake i te Search and Surveillance Act 2012* (NZLC 141, 2017).

Q46 Do you think there needs to be increased independent oversight of the use of DNA in criminal investigations?

Q47 If so, what oversight functions and powers do you see as being the most important?

Q48 What form of oversight body do you think might be appropriate?

Part E

Questions and Appendices

List of questions

CHAPTER 2: FRAMEWORK FOR ANALYSIS

QUESTIONS

Q1 One of our goals is to ensure that legislation regulating the use of DNA in criminal investigations is fit for purpose. It must have a clear purpose that has been robustly tested, be certain and flexible for the future and be appropriately comprehensive and effective for that purpose within the context of the wider criminal justice system. What do you think about the way we have framed this goal?

Q2 One of our goals is to ensure that the use of DNA in criminal investigations is regulated in a way that is constitutionally sound. This requires ensuring that the regime is consistent with the principles of the Treaty of Waitangi and NZBORA and that any intrusions upon tikanga and privacy are minimised. What do you think about the way we have framed this goal?

Q3 One of our goals is to ensure that legislation governing the use of DNA in criminal investigations is accessible. It should be conceived of and expressed simply. What do you think about the way we have framed this goal?

CHAPTER 4: TIME FOR A NEW ACT

QUESTIONS

Q4 Do you think that the CIBS Act should be repealed and replaced with a new Act? Why or why not?

CHAPTER 6: FORENSIC DNA PHENOTYPING

QUESTIONS

Q5 What concerns do you have, if any, about the use of forensic DNA phenotyping in criminal investigations?

Q6 How do you think forensic DNA phenotyping should be regulated in New Zealand?

CHAPTER 7: FORENSIC COMPARISONS

QUESTIONS

Q7 What concerns do you have, if any, about the introduction of new DNA analysis techniques into casework in New Zealand?

Q8 What factors do you think should be considered before a new DNA analysis technique is introduced into casework? Who do you think should make that decision?

Q9 Do you think that the role of Police "forensic service provider" should be recognised in statute? If so, how do you think that role should be structured?

Q10 What concerns do you have, if any, about the increased use of highly sensitive DNA analysis techniques (that enable trace DNA to be analysed) in criminal investigations?

Q11 What limits, if any, do you think there should be on the type and/or amount of information that may be included in a DNA profile that is generated from a crime scene sample and a reference sample for direct forensic comparison purposes?

CHAPTER 8: REFERENCE SAMPLES – DIRECT COLLECTION

QUESTIONS

Q12 What methods for obtaining a suspect or elimination sample directly from a person should be available in new legislation (that is, venous, fingerprick, buccal (mouth) swab, tape and/or fingerprint) and why?

Q13 Do you think that, if a person refuses to comply with a suspect or juvenile compulsion order, a police officer should be able to use reasonable force to obtain the sample? If so, what legislative safeguards do you think should be in place? If not, what should happen if the person refuses to comply with the order?

Q14 What concerns, if any, do you have about police officers obtaining suspect samples from adults, young persons (aged 14 to 16)[1] and prosecutable children (aged 10 to 13) by consent? How do you think those concerns could be best addressed in new legislation?

Q15 Do you think that a statutory framework should be put in place governing the collection of elimination samples (that is, samples from victims, third parties and investigators)? If so, what do you think the key features should be?

Q16 How do you think mass screenings should be regulated in New Zealand?

1 Due to change to 17 years on 1 July 2019.

CHAPTER 9: REFERENCE SAMPLES – INDIRECT COLLECTION

QUESTIONS

Q17 Instead of obtaining a reference sample directly from a suspect, do you think that a police officer should be able to seize a personal item belonging to the suspect or something that they have touched in order to compare it to a crime scene sample? If so, in what circumstances do you think this would be appropriate?

Q18 Instead of obtaining a reference sample directly from a suspect, do you think that a police officer should be able to obtain access to the suspect's newborn blood spot card in order to compare it to a crime scene sample? If so, in what circumstances do you think that would be appropriate?

Q19 Instead of obtaining a reference sample directly from a suspect, do you think that a police officer should be able to obtain a reference sample from one of the suspect's close relatives in order to compare it to a crime scene sample? If so, in what circumstances do you think this would be appropriate?

Q20 Do you have any concerns about Police using information that is publicly available on genealogical websites as an investigative tool to help identify potential suspects in criminal investigations?

CHAPTER 10: CRIME SAMPLE DATABANK

QUESTIONS

Q21 Do you think that the Crime Sample Databank (CSD) should be expressly referred to in legislation? If so, what level of detail do you think would be appropriate?

Q22 Do you have any particular concerns about victim and third-party profiles being uploaded to the CSD? If so, how do you think those concerns would best be addressed?

Q23 Do you have any concerns about low-quality crime scene profiles being uploaded onto the CSD? If so, how do you think those concerns would best be addressed?

Q24 What type of offending do you think we should aim to resolve using the CSD? Put another way, do you think that DNA profiles associated with any level of offending should be able to be uploaded onto the CSD, or should there be a seriousness threshold? If so, what level of seriousness do you think would be appropriate?

Q25 Do you think that additional steps should be taken to measure how effective New Zealand's DNA profile databanks are in helping to resolve criminal investigations? If so, what do you think those steps should be?

CHAPTER 11: KNOWN PERSON DATABANK – COLLECTION

QUESTIONS

Q26 Generally speaking, the threshold for obtaining DNA profiles for the known person databank is that the triggering offence must be imprisonable. What offence threshold do you think is appropriate, and how do you think it should be framed? For example, should the threshold be framed as a list of triggering offences, should it be based on the maximum penalty for the triggering offence, should it be based on whether the person serves a prison sentence or should it be framed a different way?

Q27 Do you think that it is appropriate to obtain biological samples from convicted offenders for the purpose of the known person databank? If so, how do you think these samples should be collected? For instance, should they continue to be obtained by databank compulsion notice, and if so, what time limit should apply? Alternatively, do you think it would be appropriate to obtain a databank sample at the time a person is arrested and then effectively quarantine it until the relevant court proceedings have concluded?

Q28 Do you think that it is appropriate to obtain biological samples from suspects for the purpose of the known person databank? If so, how do you think these samples should be collected? For instance, if a person provides a suspect sample in relation to an investigation, should the resulting DNA profile also be uploaded onto the known person databank (prior to any court proceedings concluding)? Alternatively, should the court be empowered to order that a charged person must provide a databank sample (which can then be compared to the Crime Sample Databank) before the court proceedings against them have concluded? If so, what factors should the court take into account?

Q29 Do you think that it is appropriate to obtain biological samples from people for the purpose of the known person databank if they are not convicted offenders or suspects? If so, who should these samples be collected from and how should they be collected? For instance, do you think there should be a universal databank, and if so, how would that work in practice? Do you think police officers should be able to obtain databank samples by consent, and if so, who should they ask?

CHAPTER 12: KNOWN PERSON DATABANK – USE

QUESTIONS

Q30 What limits do you think should be placed around New Zealand Police comparing an overseas crime scene profile to the known person databank on behalf of a foreign law enforcement agency?

Q31 Should the DNA profiles on the known person databank ever be made available for research in an “anonymised” form? If so, in what circumstances and how do you think that the request/approval process should be managed?

CHAPTER 13: FAMILIAL SEARCHING

QUESTIONS

Q32 What concerns do you have, if any, about the use of familial searching in criminal investigations?

Q33 How do you think familial searching should be regulated in New Zealand?

CHAPTER 14: RETENTION OF SAMPLES AND PROFILES

QUESTIONS

Q34 Do you think that a person should be able to choose to have their biological sample returned to them (as opposed to it being destroyed)?

Q35 What procedures do you think should surround the destruction of biological samples? Should people have a choice as to how it is done? Should people be notified when it has occurred?

Q36 Should an oversight body audit compliance with the rules around retention and destruction of biological samples and tikanga, ensure secure storage of samples and consider compliance consistency with tikanga?

Q37 Should suspect and elimination samples that are obtained from known persons in relation to specific cases be retained after a DNA profile is generated? If so, why, and for how long?

Q38 Should crime scene samples be retained after the associated criminal investigation is closed? If so, do you think they should be retained in all cases or only in cases over a certain threshold of seriousness? How long should they be retained?

Q39 How should a convicted person's request for reanalysis of a crime scene sample be managed? Should the procedure be set out in legislation?

Q40 Do you have any concerns around DNA profiles being retained on the known person databank indefinitely?

Q41 Do you think the DNA profile retention periods that currently apply to the known person databank should be simplified?

Q42 Do you think that the DNA profile retention periods that apply to the known person databank should be changed to place a greater emphasis on rehabilitation?

Q43 Do you think that steps should be taken to ensure that a person's DNA profile is not retained for a lengthy period of time on the known person databank following their death? If so, what measures do you think should be put in place?

Q44 Should crime scene profiles be retained on the Crime Sample Databank indefinitely? If not, what legislation and/or policies do you think would ensure that the profiles are removed at an appropriate time?

Q45 Should an independent oversight body oversee the retention, security and destruction (as appropriate) of DNA profiles (whether held on case files, indices or databanks)?

CHAPTER 15: OVERSIGHT

QUESTIONS

Q46 Do you think there needs to be increased independent oversight of the use of DNA in criminal investigations?

Q47 If so, what oversight functions and powers do you see as being the most important?

Q48 What form of oversight body do you think might be appropriate?

Appendix 1

TERMS OF REFERENCE - THE USE OF DNA IN CRIMINAL INVESTIGATIONS

The Law Commission will conduct a comprehensive review of the Criminal Investigations (Bodily Samples) Act 1995 (the Act). The Act provides the New Zealand Police with powers to collect, retain, and use DNA in criminal investigations. It also regulates two DNA profile[1] databanks that are maintained, on behalf of the Police, by the Institute of Environmental Science and Research (ESR).

The Act was the subject of significant amendments in 2003 and 2009. The purpose of this review is to determine whether the current legislation is fit for purpose and whether it is keeping pace with developments in forensic science, international best practice and public attitudes, in relation to the collection, retention and use of DNA in criminal investigations. The review will also examine whether the Act gives appropriate recognition to both law enforcement values and human rights, including the right to privacy.

The Law Commission's review will include (but not be limited to) an examination of the following areas and issues:

Recognising public and individual interests

- Identification and assessment of the law enforcement benefits of the use of DNA in criminal investigations
- Whether human rights, including the right to privacy, are appropriately recognised
- The legal and ethical issues around the control and ownership of DNA
- Whether Māori interests, including in relation to tikanga Māori, are appropriately recognised.

Recognising the broader context

- Recent and predicted scientific developments in the forensic analysis of DNA
- International agreements, obligations and best practice
- The relationship between the Act and regimes governing the collection, retention and use of other biometric information including fingerprints

[1] It is important to note the distinction between a DNA *sample* and a DNA *profile*. A DNA *sample* means the actual physical sample of bodily/genetic material: for instance a sample of blood or saliva from a mouth swab. The information derived from the forensic analysis of the sample is a DNA *profile*. A DNA sample is also sometimes referred to as a "bodily sample". The Criminal Investigations (Bodily Samples) Act 1995 governs how DNA samples from blood or mouth swabs must be obtained. However, most genetic material can be used to obtain a DNA sample.

- The relationship between the Act and other related legislation including the Children, Young Persons and their Families Act 1989, the New Zealand Bill of Rights Act 1990, the Privacy Act 1993, the Health Information Privacy Code 1994, the Criminal Record (Clean Slate) Act 2004 and the Search and Surveillance Act 2012.

Improving legislative design

- The scope, coverage and accessibility of the Act, with a view towards simplification and improving legislative design.
- The checks and balances that protect the integrity of the databank regime
- The criteria for deciding from whom to collect a DNA sample. Procedural and technical matters including the requirements governing consent, the use of reasonable force, taking DNA samples from children, young persons and other vulnerable persons, retention of DNA samples and DNA profiles, reporting requirements, record keeping and information sharing with domestic agencies and foreign law enforcement agencies.

Review Process

This review will be conducted by the Law Commission. The Commission will engage with interested parties in both the public and private sector during the review, and will carry out a public consultation process. The Commission will also establish an officials group and an expert advisory group to provide technical expertise and advice representing a range of perspectives.

The Commission will produce an issues paper in mid-2017. Following a formal consultation process, the Commission will publish a final report in August 2018.

Appendix 2

VOLUNTARY ETHNICITY FORM

POL730
02/12

New Zealand POLICE
Nga Pirihimana O Aotearoa

Voluntary

DNA Ethnicity Questionnaire

INSTRUCTIONS

Ask the person giving the sample if they would like to complete the questionnaire. The information is used for statistical purposes only. There is no compulsion for the person to supply the information.

The information must be obtained from the person giving the sample.

1 What is your ancestral origin (Tribal group/language group/island)?

POL 730
02/12

DO NOT put your name or family's name in the boxes.

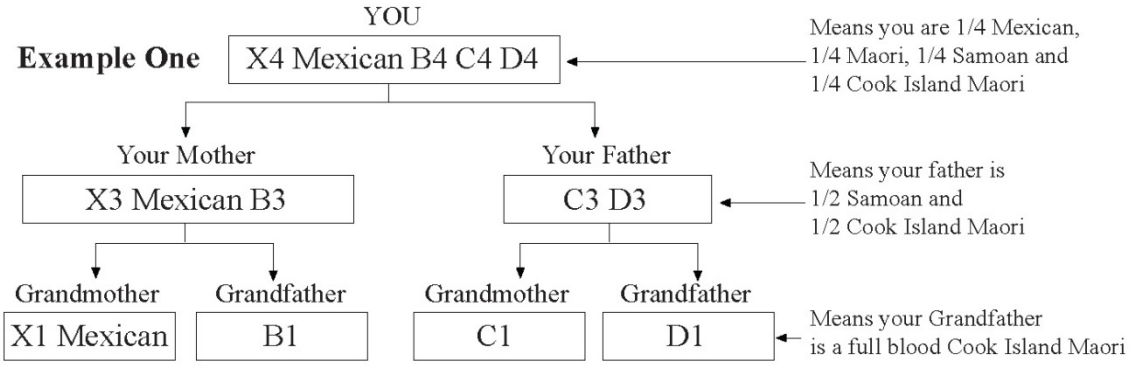
Choose appropriate categories from the table at right for what you know about yourself and your family (see example 1).

If you and/or your family are of an ethnic group not listed in the table, use the category "other" and specify which ethnic group you are from, e.g. "X4 Mexican" means you are 1/4 Mexican. See example 1.

If you are 1/8, 1/16 or 1/32 of Maori, and the rest of your ethnicity consists of another ethnic group, (for example, Caucasian), list your self in the boxes as "B5, rest Caucasian" (see example 2).

	Full	3/4	1/2	1/4	1/8	1/16	1/32
Caucasian	A1	A2	A3	A4	A5	A6	A7
NZ Maori	B1	B2	B3	B4	B5	B6	B7
Samoan	C1	C2	C3	C4	C5	C6	C7
Cook Island Maori	D1	D2	D3	D4	D5	D6	D7
Tongan	E1	E2	E3	E4	E5	E6	E7
Niuean	F1	F2	F3	F4	F5	F6	F7
Tokelauan	G1	G2	G3	G4	G5	G6	G7
Fijian	H1	H2	H3	H4	H5	H6	H7
Vietnamese	J1	J2	J3	J4	J5	J6	J7
Korean	K1	K2	K3	K4	K5	K6	K7
Indian	L1	L2	L3	L4	L5	L6	L7
Pakistani	N1	N2	N3	N4	N5	N6	N7
Chinese	P1	P2	P3	P4	P5	P6	P7
Fijian Indian	Q1	Q2	Q3	Q4	Q5	Q6	Q7
Other (specify)	X1	X2	X3	X4	X5	X6	X7
Don't know	U						

Example One

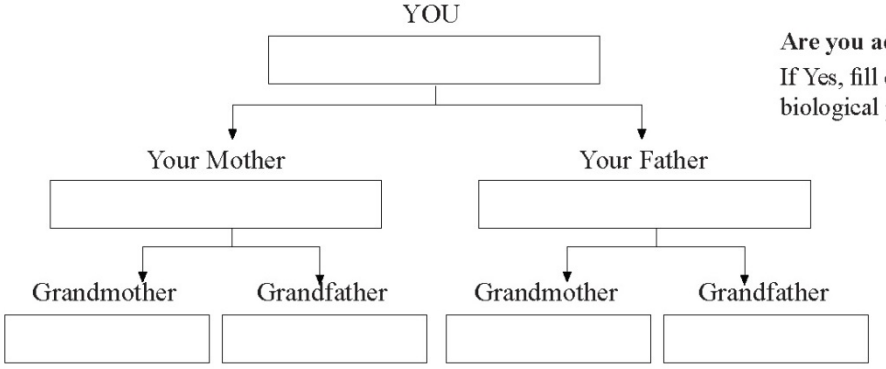


Example Two



YOUR ETHNIC GROUP

Insert the appropriate categories into the diagram here, in the spaces indicated.



Are you adopted? Yes / No / Don't know

If Yes, fill out what you know about your biological parents, not your adoptive parents

Appendix 3

POLICE FAMILIAL SEARCHING PROTOCOL

NZ Police request for a familial search of the NZ DNA Profile Databank

Before proceeding with a familial search please check the O/C is aware that authorisation for a familial search must be obtained from the District Crime Manager. A record of that authorisation must be submitted to Inspector John Walker, National Forensic Services Adviser at PNHQ, along with this familial search request.

A familial search will be charged at the advanced analytical hourly rate & is additional to other ESR forensic charges associated with the case. Please check that the O/C is aware that these additional charges will apply.

Police case name/Operation name:

DOCLOC number:

O/C case:

Familial Search Authorised by:

Please indicate here that cost implications have these been raised with (O/C's name) & the additional cost has been approved:

Date of request:

ESR case number:

Biology case manager:

Date search undertaken:

Date results provided to police:

Protocols - Familial Testing

The Criminal Investigations (Bodily Samples) Act 1995 (CI(BS) Act), provides the legislative framework for the collection of samples from individuals for the purpose of storing DNA profiling information onto a NZ DNA Profile Databank (DPD).

The legislation does not extend to providing a framework for forensic utilisation of the DPD. In its absence, ESR and NZ Police have developed agreed procedures for operational activities involving the NZ DPD.

Familial searching:

1. A familial search of the DPD may be considered for a serious offence where there is no DNA link resulting from a specific crime profile search.

2. Familial searching does not contravene the CI(BS) Act however, it is recognised by both ESR and the NZ Police that this type of search has important ethical implications and should only be considered on a case-by-case basis.

3. As this type of search explores familial relatedness it shall only be undertaken where it is considered necessary and proportionate in a particular case.

4. NZ Police shall have an authorisation process for familial search requests to ESR which considers the seriousness of the offence and whether a familial search is appropriate for the investigation.

5. NZ Police shall provide ESR with the necessary documentation which demonstrates the search has been authorised and should proceed. Authorisation shall be via completion of the proforma "NZ Police Request for a Familial Search of the NZ DNA Profile Databank".

6. A familial search will result in a list of potential close relatives to the offender and will contain sensitive personal information.

7. The list is ranked statistically on the basis of how likely a person will be a relative of the offender. ESR shall assist NZ Police in the scientific interpretation of these results.

8. Access to this list shall be restricted to Police and ESR staff involved in the investigation.

9. ESR shall keep a record of familial search requests made by NZ Police and shall provide a summary of these in an annual NZ DNA Profile Databank Report.